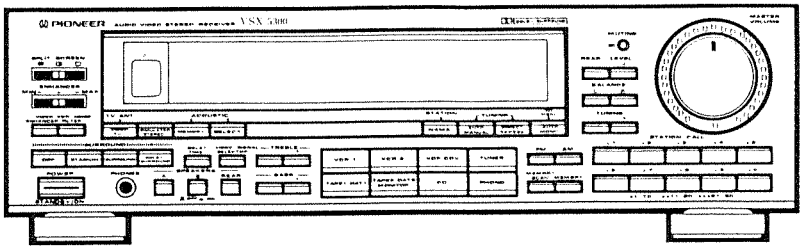
Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-5300



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISSE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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The future of sound and vision.

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

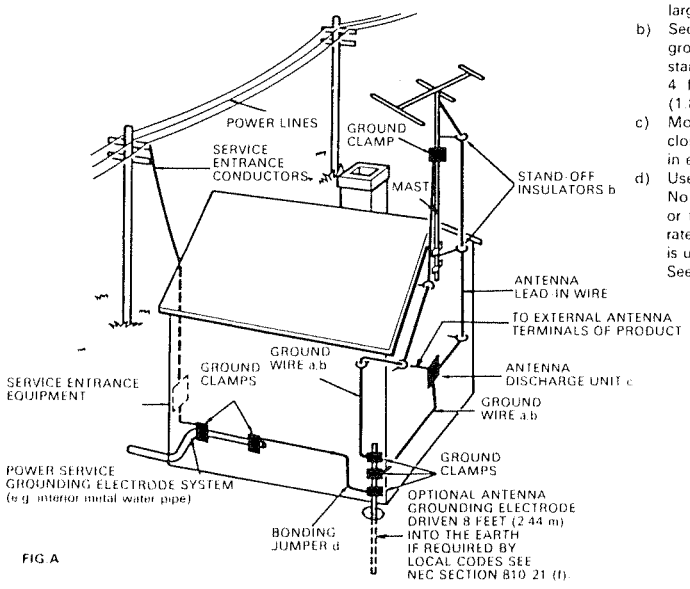

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
ANTENNA DISCHARGE UNIT c
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
BONDING JUMPER d

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.

b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.

c) Mount antenna discharge unit as closely as possible to where lead-in enters house.

d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

frame search and time search.

BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K., and Australian models are not provided with these switches.

The line voltage selector switches are on the rear panel. Before your model is shipped from the factory,these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

CHANNEL STEP/FM DE-EMPHASIS SWITCH

The unit has been factory preset to the channel allocation and de-emphasis value for the area in which it is to be sold.If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

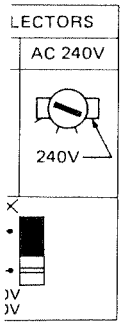
[100kHz/10kHz/75μs] position:

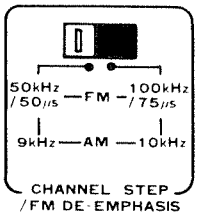
Set to this position for areas with an FM reception step of 100kHz,AM 10kHz, and de-emphasis 75μs.

[50kHz/9kHz/50μs] position:

ı, for areas with an FM reception step of 50kHz, AM
ɔhasis 50μs.

ut the channel allocation and de-emphasis values for
t your dealer for correct information.





MEMORY FUNCTION

Ɛ) of tone control settings can be preset.The settings
d flat tone response functions can also be selected

ALL-LETTER DISPLAY FUNCTION

of broadcast stations can be preset (up to four

be set to show either the broadcasting frequency or
or example, WBAC). The four-character display can al-
to display your name, or the type of material broad-
ɔle, JAZZ, NEWS, etc)

ɔte Control Unit

ɛd remote control unit you can operate any Pioneer audio
ɪnent bearing the SR mark.

CORRECTION

(INCORRECT) — (CORRECT)

VSX-5300

- **Page 14: Section "⑪ IMPEDANCE SELECTOR switch"**
  - When using two pairs of speakers:
    Select ② as the selector switch position and use speakers having impedance of 8 ohms or more.
  - When using two pairs of speakers:
    Select ① as the selector switch position and use speakers having impedance of 8 ohms or more.
- **Page 16: Section "⑥ ACOUSTIC switches"**

  FLAT→LOUDNESS→A→B→C→D→E→F

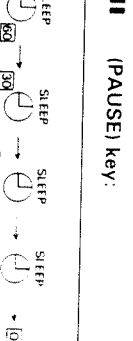
  FLAT→LOUDNESS→A→B→C→D→E
- **Page 19: Section "DIRECT ACCESS TUNING"**

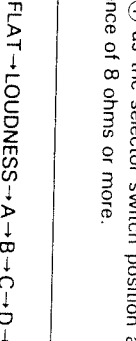
  Notes regarding FM or AM direct access tuning
  - When the CHANNEL STEP switch is set to the AM 10kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.

  Notes regarding FM direct access tuning
  - When the CHANNEL STEP switch is set to the FM 100kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.
- **Page 30: Section "TAPE DECK OPERATION"**

  (PAUSE) key:

  ❚❚ (PAUSE) key:
- **Page 32: Section "RECEIVER SECTION OPERATION"**





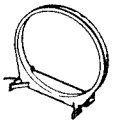
- **Page 31: Section "VDP OPERATION"**

  Please delete the next explanation from the operating instructions.

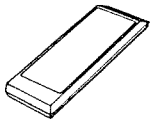
  PGM (PROGRAM) key:

ACCESSORY ITEMS

FM T-type Antenna



AM Loop Antenna



Remote control unit

Dry cell battery

SURROUND EFFECT

This unit has a built-in surround processor for adding presence and an expansive effect to the sound.

STADIUM:
Select this position when watching sports programs such as baseball games etc., for a stadium-like effect.

SIMULATED SURROUND:
Use this mode for monaural sources. You will obtain an expansive sound, with outstanding presence.

DOLBY SURROUND
Choose this setting for movies (especially video tapes bearing the DOLBY SURROUND mark) and music playback. You will enjoy an effect similar to that of movie theaters or concert halls.
When using DOLBY SURROUND, a delay time setting of 20ms is usually about right. If your rear speakers are very close to the listening position, try 30ms; if they are some distance away, 15ms.

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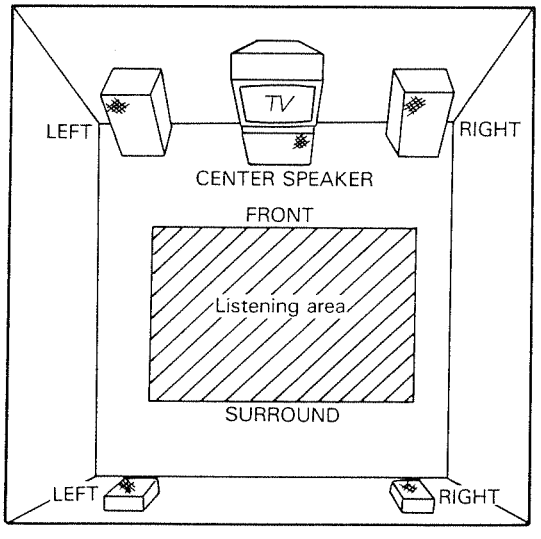
Surround Speaker Installation Examples
To get the most out of the surround system, place the speakers as shown below.

Example of center speaker configration

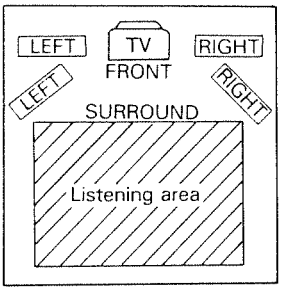


[Example A:]
Sound appears to come from directly in front of the listener. Good for listening to music recordings.
[Example B:]
Offers most varied effects; good for watching sports programs or listening to live recordings.
[Example C:]
Good sound dispersion; recommended for movies, etc.

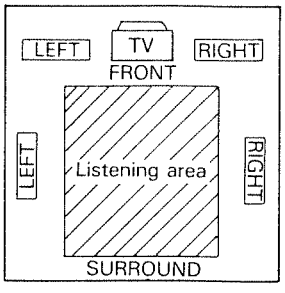
EFFECT CHART

SURROUND \ Example	A	B	C
SIMULATED	○	○	○
STADIUM	×	○	○
DOLBY	×	○	○

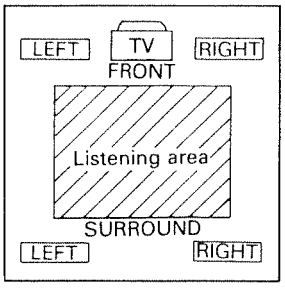
Example A:



Example B:



Example C:



TWO WAY SOUND EFFECTS

VCR NOISE FILTER

When playing back a monaural VCR, there is a tendency for audible high-frequency hiss to be produced.
When playing back video tapes, if the audio channels contain noticeable high-frequency tape hiss, pressing this switch will improve the sound.

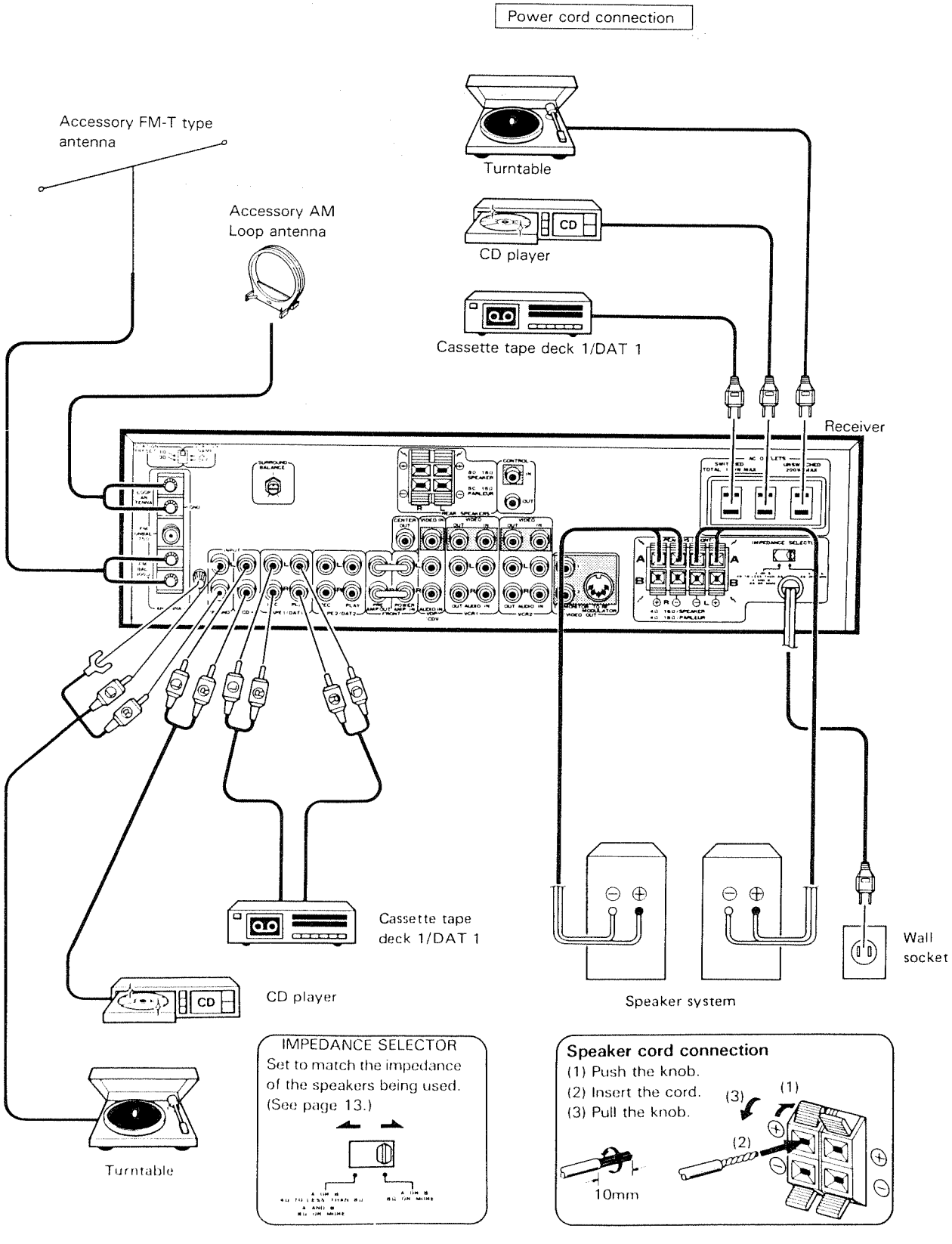
SIMULATED STEREO

This function transforms monaural signals into simulated stereo sound. Use it when you wish to experience a sense of stereo presence when listening to AM broadcasts, or VCR and other monaural signal sources.

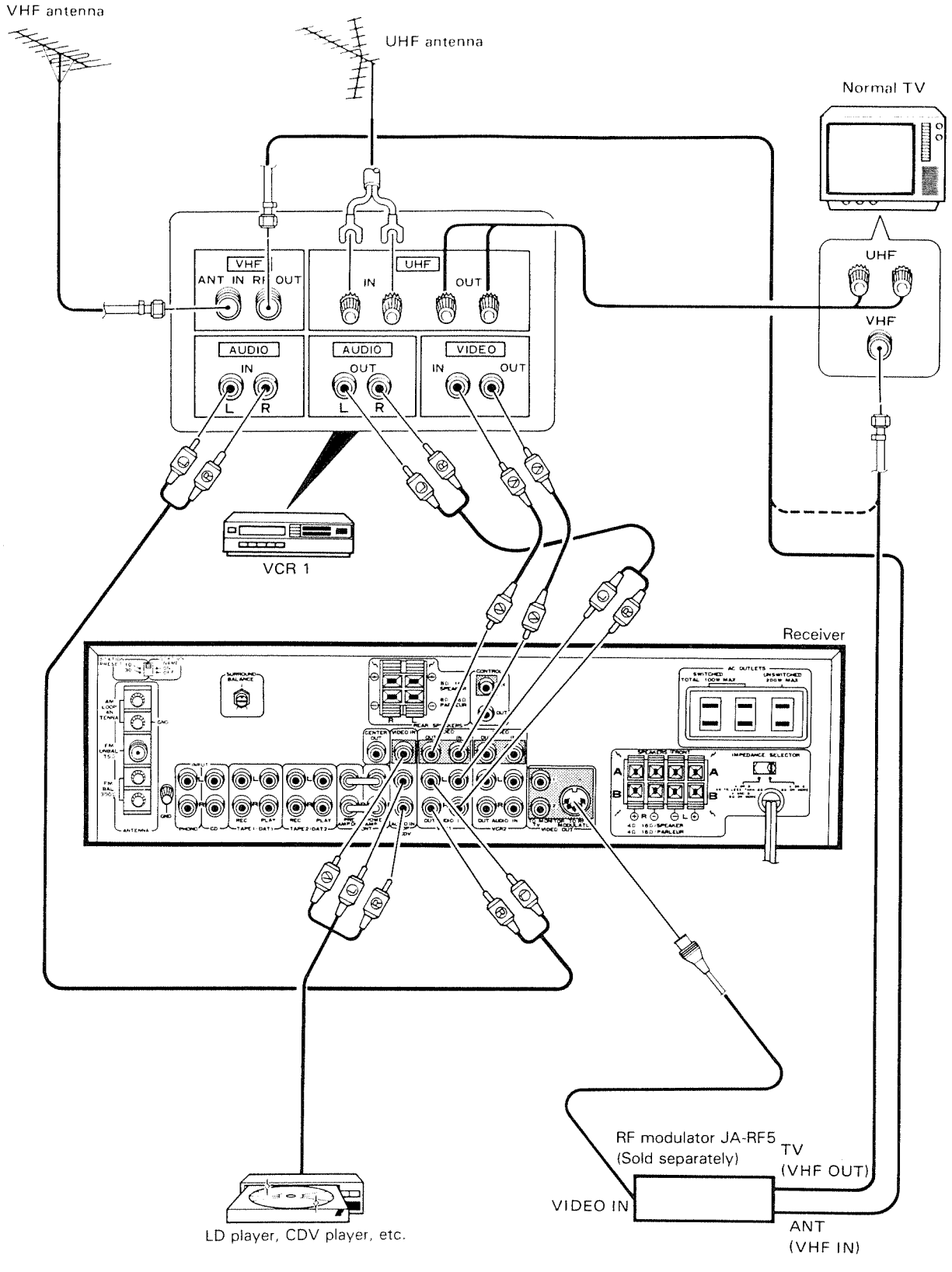
NOTE:
The simulated stereo function can also be used with stereo sound sources, but it will result in an effect somewhat different from the normal stereo sound.

CONNECTIONS

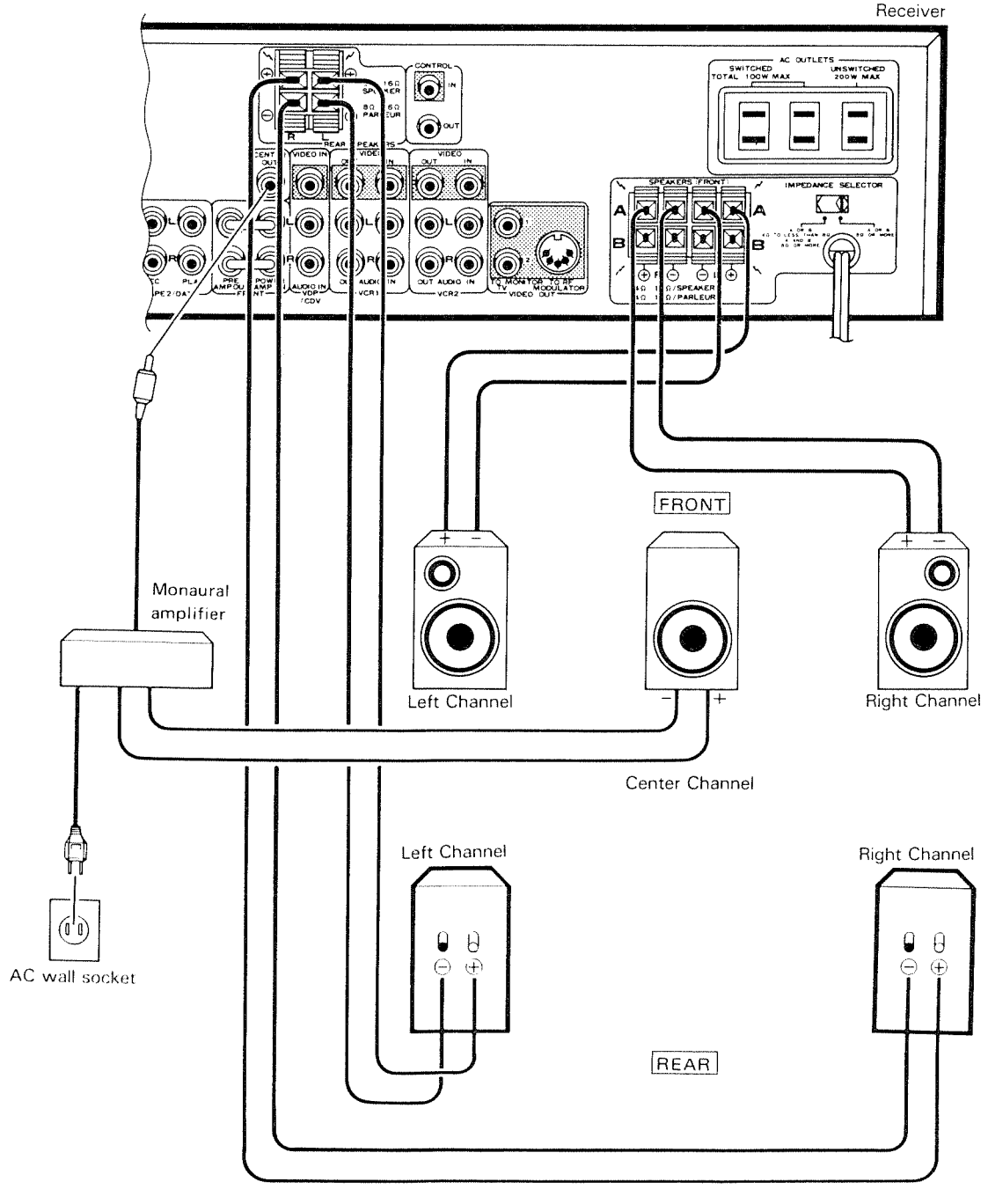
BASIC AUDIO SYSTEM CONNECTIONS



BASIC VIDEO SYSTEM CONNECTIONS



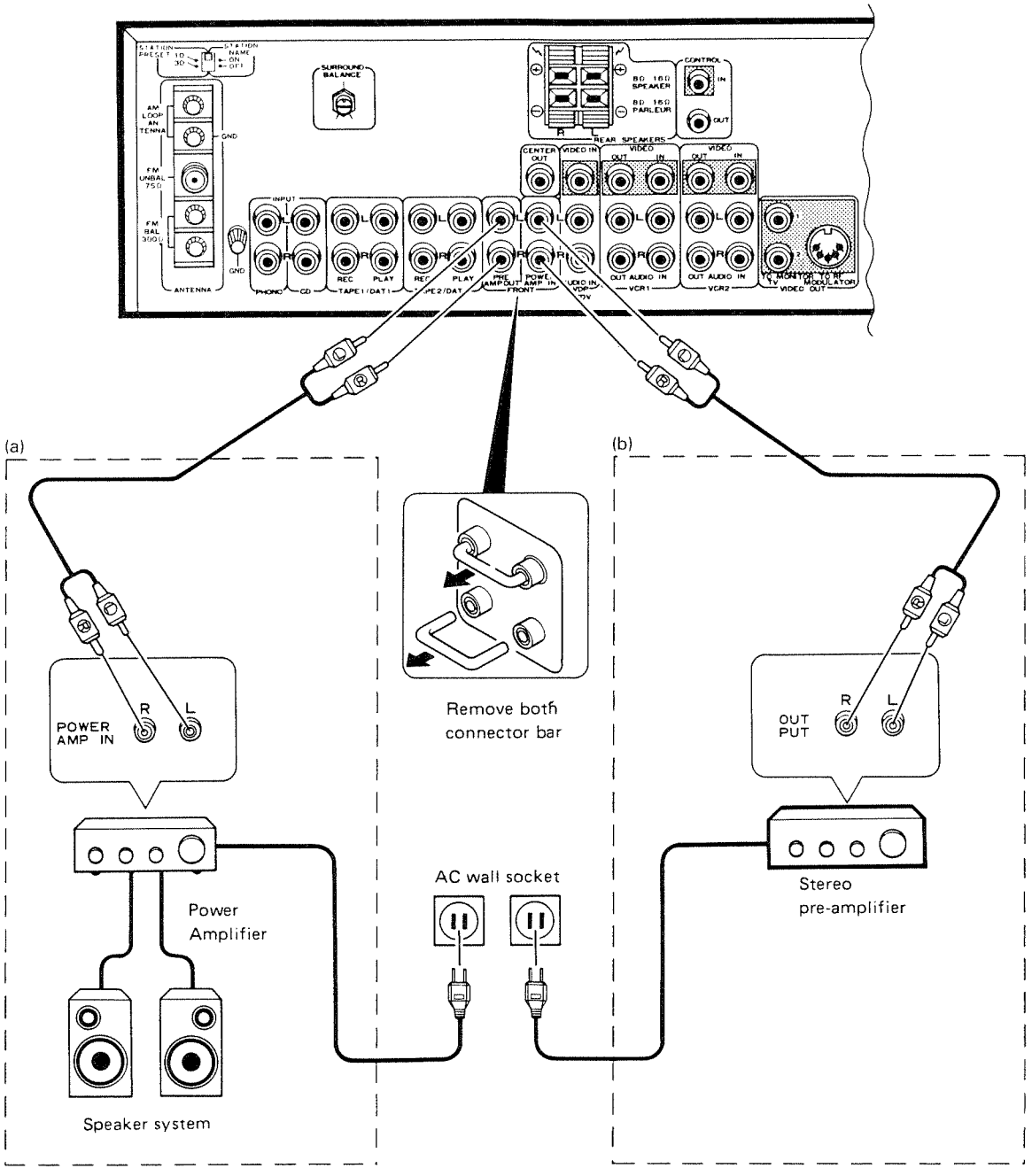
SURROUND SPEAKER CONNECTIONS



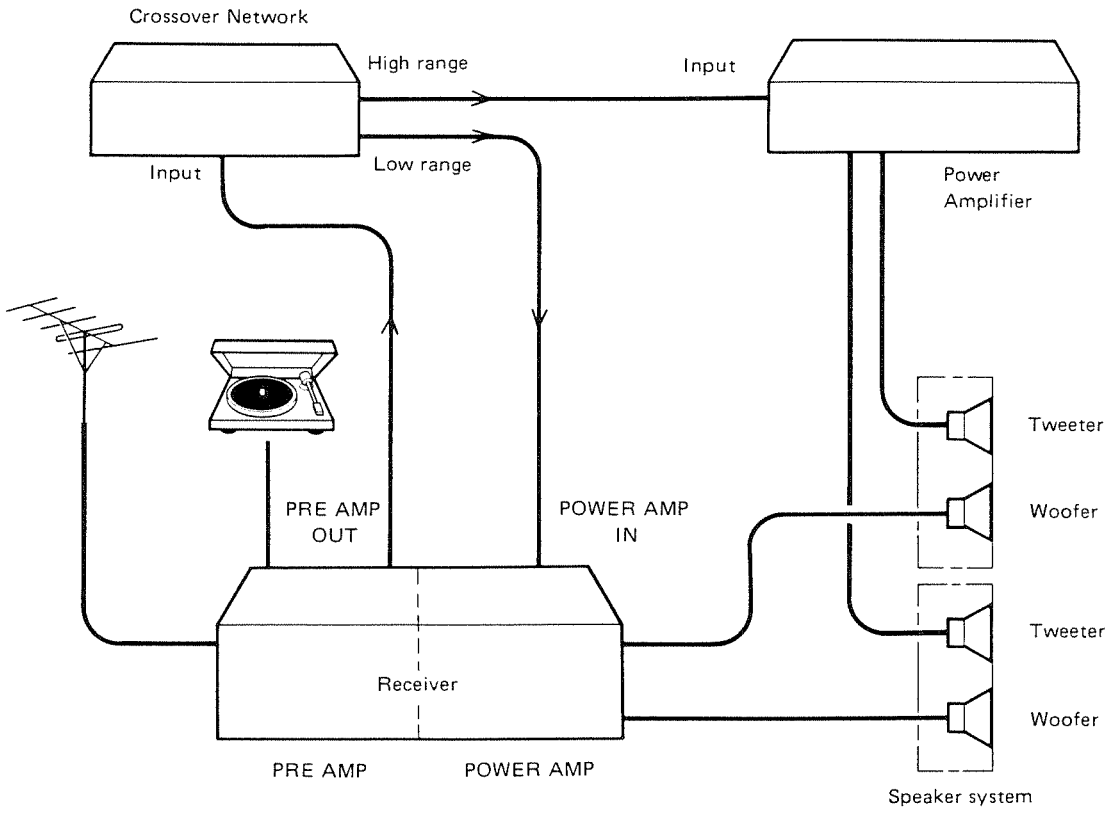
When used with another amp (power amplifier, preamplifier).

(a)
When using the preamplifier of the receiver and using a separate stereo power amplifier to increase power.

(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.

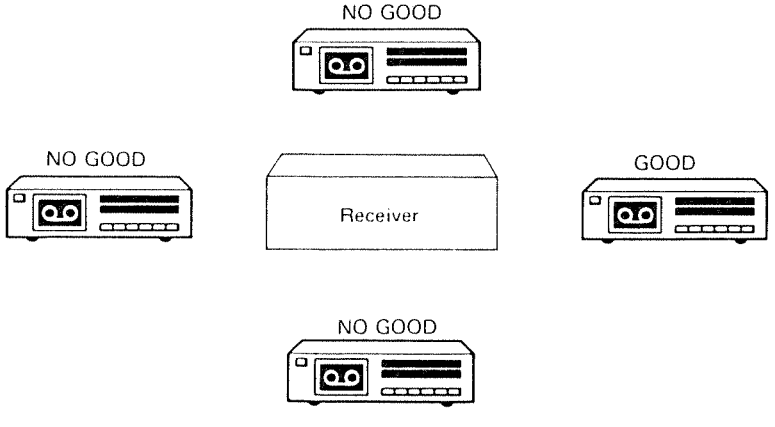


Application example — MULTI-AMPLIFIER SYSTEM

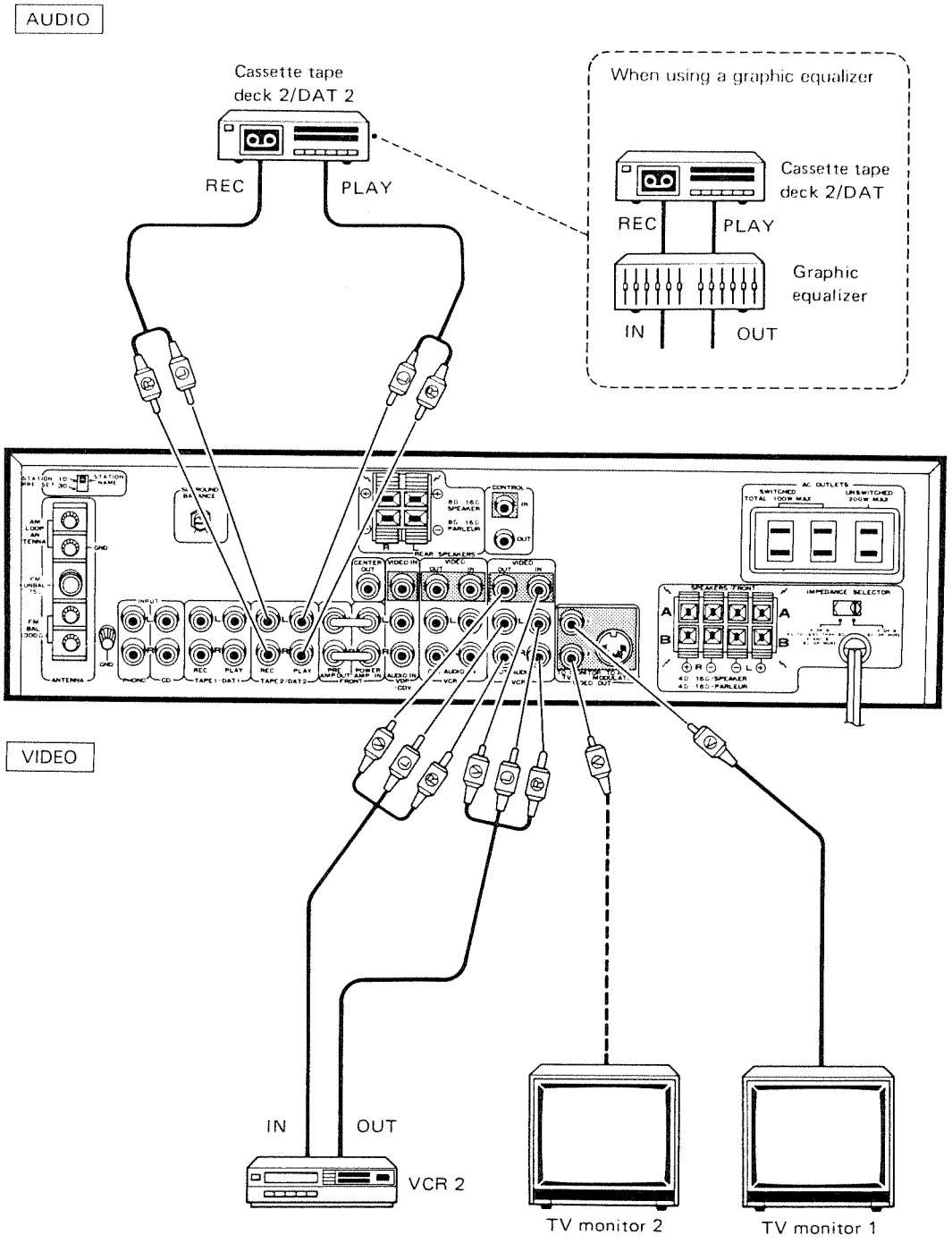


Precaution regarding installation position of cassette tape deck.

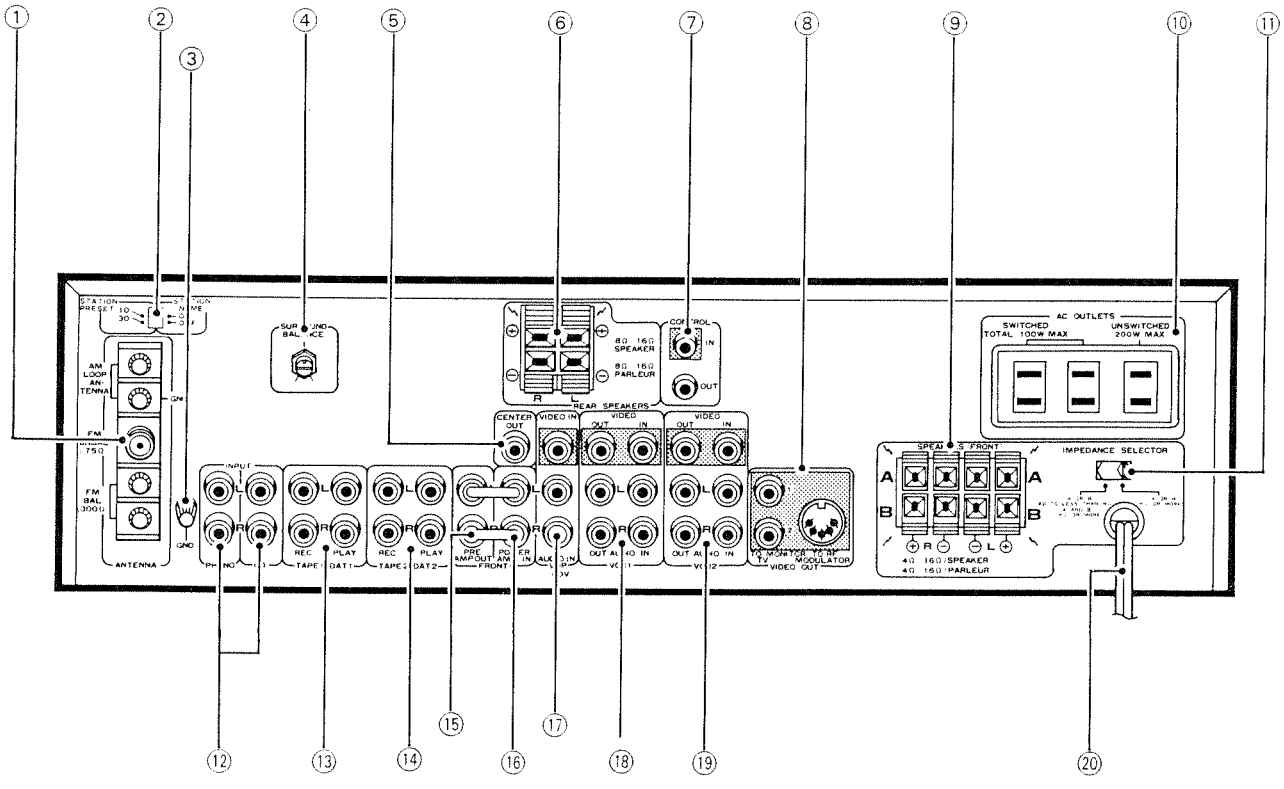
If the cassette tape deck is installed in the "NO GOOD" positions shown in the drawing below, hum may occur during playback.



APPLICATIONS



REAR PANEL FACILITIES



① FM/AM ANTENNA terminals
Use these antenna terminals for reception of normal FM and AM broadcasts.

② STATION PRESET/STATION NAME switch
Determines the number of presets possible using the STATION CALL switches.

10: You can store a name for each station at this position, but each STATION CALL switch can store one station (10 station total).

30: Each STATION CALL switch can store three stations (30 stations total). (Press once, twice, or three times to select.)

③ GND terminal
Connect the turntable ground lead to this terminal.

④ SURROUND BALANCE control
Use to adjust the surround effect from the surround speakers. Normally leave in the center position. When inputting a monaural signal, adjust so that the surround output is minimum.

⑤ CENTER OUT jack
This is the Dolby surround center channel signal output jack.It can also be used as a 3D system MONO output.

⑥ REAR SPEAKERS terminals
Connect the surround speakers to these terminals.

NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

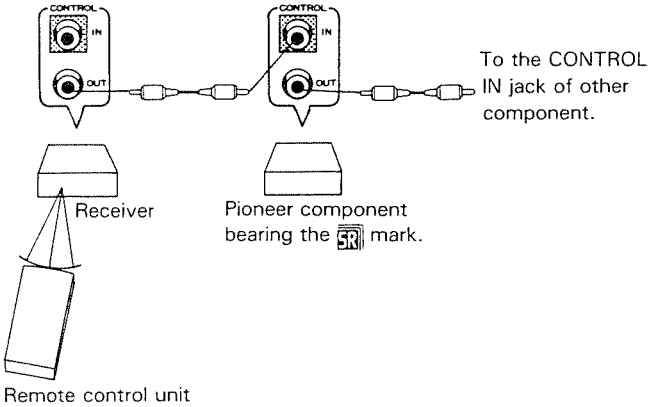
Use surround speakers of impedance 8Ω — 16Ω.

⑦ REMOTE CONTROL IN/OUT jacks
IN: Connect this jack to other Pioneer components (main unit or remote control unit) when using those components to control this unit.

OUT: Connect this jack to other Pioneer components when using the remote control of this units to control the other components.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.



⑧ VIDEO OUT jacks
Use to connect a TV set for watching program materials from a VCR or VDP/CDV connected to this unit.

[TO MONITOR TV jacks]

Connect to monitor TV or to TV sets with video input terminals.

[TO RF MODULATOR jack]

Use to connect a normal TV set. When performing connections, the RF MODULATOR JA-RF5 (sold separately) is required. By connecting an RF modulator, video signals can be converted to VHF signals (U.S. channel 3 or 4), thus allowing this unit to be used to view the selected source on a normal television set.

NOTE:

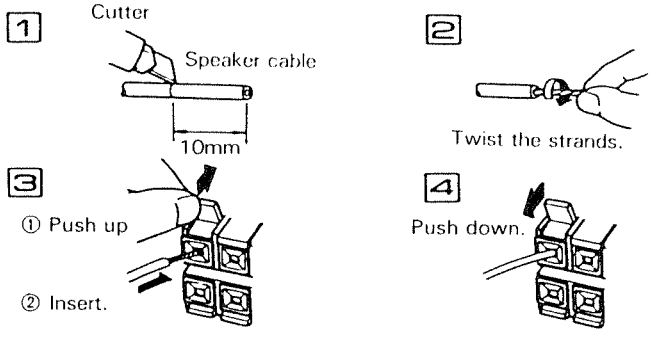
A "normal TV set" as noted above is one for which RF connections alone are possible.

Sound is not output from the TO RF MODULATOR jack. Use the speakers connected to this unit to listen to the sound.

⑨ SPEAKERS (FRONT) terminals
A: Connect to a first set of speakers.

B: Connect to a second set of speakers.

Speaker lead wire preparation and connection.



NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contacts with each other.

Use speakers of impedance 4Ω — 16Ω. Also set the IMPEDANCE SELECTOR switch to match the impedance of your speakers.

⑩ AC OUTLETS
(SWITCHED TOTAL 100W MAX)

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equippment should not exceed 100W.

(UNSWITCHED 200 W (U.S. and Canadian model), 100 W (Multi-voltage model) MAX)

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W (U.S. and Canadian model), 100 W (Multi-voltage model).

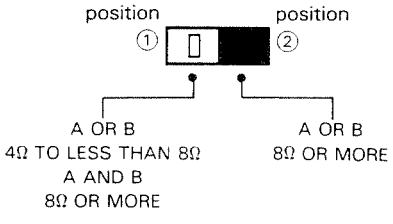
The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

NOTE:

Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.

This can cause the receiver to malfunction.

⑪ IMPEDANCE SELECTOR switch
Set this switch to match the impedance of your speakers.



- When using a pair of speakers:

Impedance of a speaker	Selector position
4Ω to less than 8Ω	①
8Ω or more	②

• When using two pairs of speakers:
Select ① as the selector switch position and use speakers having impedance of 8 ohms or more.

NOTE:
Turn off the receiver's power before changing the impedance selector switch setting.

⑫ INPUT jacks
PHONO ..... connect to the output cables from a turntable.
CD ..... connect to the output jacks of a compact disk player.

⑬ TAPE1/DAT1 jacks
Use these to connect TAPE DECK 1 or DAT (digital audio tape deck) 1.
Connecting for Recording
The tape recording jack (TAPE REC) on the tape deck or DAT should be connected to the REC side of the TAPE1/DAT1 jack on the receiver with a pin plug connecting cord.
Connecting for Playback
Connect the TAPE PLAY jack on the tape deck or DAT to the PLAY side of the TAPE1/DAT1 jack on the receiver with a pin plug connecting cord.

⑭ TAPE2/DAT2 jacks
Connect a second tape deck or second DAT to these jacks.
Connecting for Recording
The tape recording jack (TAPE REC) on the tape deck should be connected to the REC side of the TAPE2/DAT2 jack on the receiver with a pin plug connecting cord.
Connecting for Playback
Connect the TAPE PLAY jack on the tape deck to the PLAY side of the TAPE2/DAT2 jack on the receiver with a pin plug connecting cord.

⑮ FRONT PRE-AMP OUT jacks
When a separate power ampifier is used to drive the front speakers, connect the power amplifier to these jacks.

⑯ FRONT POWER AMP IN jacks
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

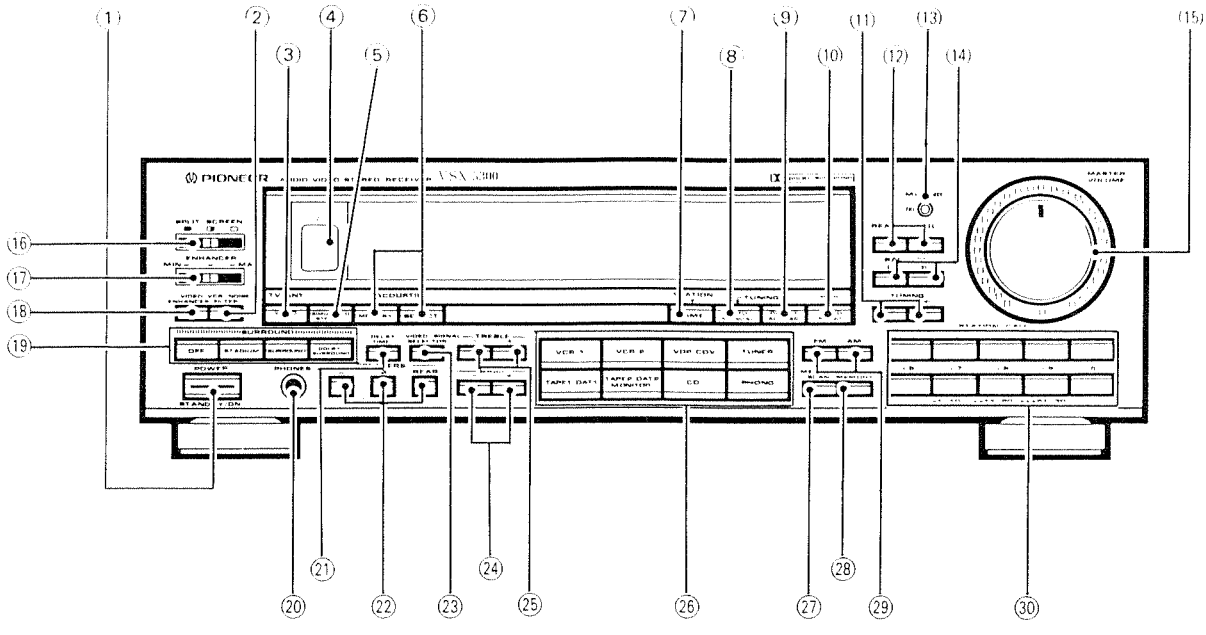
⑰ VDP/CDV jacks
[VIDEO IN]
When watching the video image from a LD player (VDP) or a CDV player, connect its VIDEO OUTPUT jacks here.
[AUDIO IN (L,R)]
When playing back the audio channel from a LD player (VDP) or a CDV player, connect its AUDIO OUTPUT jacks here.

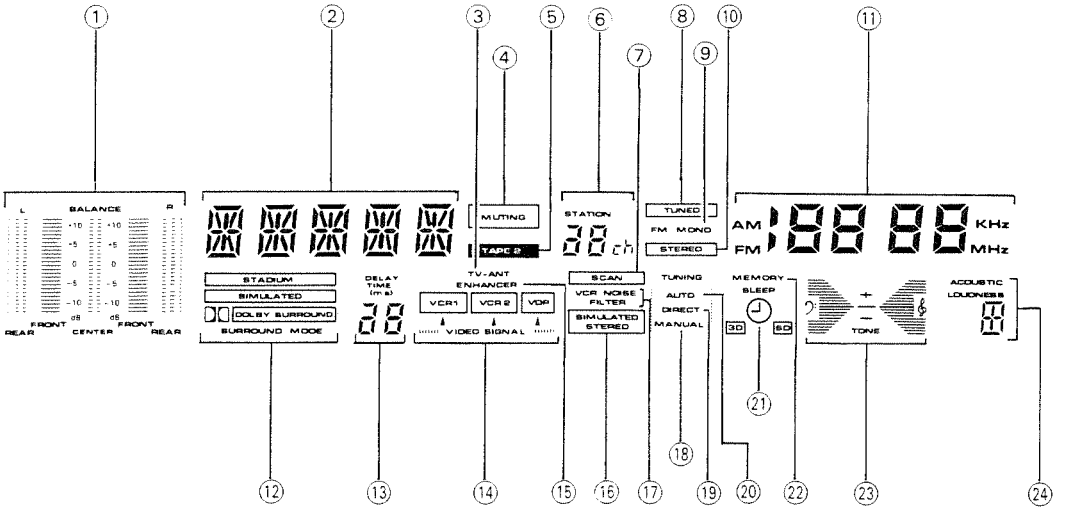
⑱ VCR1 jacks
[VIDEO OUT]
When copying program material from the video component connected to the VCR2 or VDP/CDV jacks, connect to the VIDEO INPUT jacks of the VCR used for recording.
[AUDIO OUT (L,R)]
When copying program material from the video component connected to the VCR2 or VDP/CDV jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR used for recording.
[VIDEO IN]
When monitoring the video image from a VCR used for playing, connect its VIDEO OUTPUT jacks here.
[AUDIO IN (L, R)]
When monitoring back the audio channnel from a VCR used for playing, connect its AUDIO OUTPUT jacks here.

⑲ VCR2 jacks
[VIDEO OUT]
When copying program material from the video component connected to the VCR1 or VDP/CDV jacks, connect to the VIDEO INPUT jacks of the VCR used for recording.
[AUDIO OUT (L,R)]
When copying program materials from the video component connected to the VCR1 or VDP/CDV jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR used for recording.
[VIDEO IN]
When monitoring the video image from a VCR used for copying, connect its VIDEO OUTPUT jacks here.
[AUDIO IN (L, R)]
When monitoring the audio channnel from a VCR used for copying, connect its AUDIO OUTPUT jacks here.

⑳ Power cord

FRONT PANEL FACILITIES





① POWER STANDBY/ON switch

When this switch is pressed, power is supplied to the unit. Press the switch again to turn power off

[Timer ON/OFF pssible]

When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

NOTE:

When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.

② VCR NOISE FILTER switch

If tape hiss is noticeable while performing playback of video cassette tapes, press this switch to reduce the noise.

After pressing this switch, "VCR NOISE FILTER" will appear on the display section.

NOTE:

- *This switch can be used when either VCR 1 or VCR 2 function switches is selected.*
- *The effectiveness in reducing high-frequency hiss noise varies depending on the type of tape used, the recording level, and other conditions.*

③ TV ANT (VIDEO/TV) selector switch

This switch can be used in place of the TV ANT switch on the RF Modulator JA-RF5 (sold separetely). This is effective only when the JA-RF5's TV ANT switch is set to the VIDEO position. For example:

In VIDEO mode (TV-ANT indicator in the display section goes out):

Allows you to use video components connected to the receiver.

In TV mode (TV-ANT indicator in the display section lights):

Connects the TV antenna, thus allowing you to view normal TV broadcasts, regardless of whether the receiver's POWER is ON or OFF.

NOTE:

- *When in the VIDEO mode, no sound will be produced from the TV set's speakers. Listen using the speakers connected to the receiver.*
- *Noise may be produced if the TV set's volume control is turned up. Turn down the set's volume control when listening.*
- *This switch functions only when the TV ANT selector switch on the RF Modulator is set to "VIDEO."*

④ Remote sensor

⑤ SIMULATED STEREO switch

Press to produce a simulated stereo effect when listening to monaural sources (for example, normal AM or TV broadcasts).

"SIMULATED STEREO" appears on the display section.

NOTE:

This effect is not produced through the surround speakers.

⑥ ACOUSTIC switches

MEMORY:

Pressing this switch will result in the memorization of the sound quality (tone control condition). Press again to cancel this mode.

SELECT

- This switch is used to preset the five acoustic memories (A – E).
- This switch is also used to recall previously set sound quality settings. Each time you press the switch, the sound quality setting advances in the order shown below.

FLAT → LOUDNESS → A → B → C → D → E

FLAT: For flat (normal) frequncy response.

LOUDNESS:

Emphasizes the low- and high- frequency ranges. Produces a fuller sense of sound, particularly when listening at low volume.

A – E: Memorized acoustic memory settings.

Presetting the acoustic memory

❶ **Adjust the sound quality as desired using the BASS and TREBLE control switches.**

- Settings are shown by the TONE indicator on the display section.

❷ **Press the ACOUSTIC MEMORY switch.**

- The TONE indicator on the display section blinks on and off.

❸ **Press the ACOUSTIC SELECT switch and select the acoustic memory to which you wish to assign the setting (A - E).**

- The sound quality setting is memorized approximately two seconds after you last press the ACOUSTIC SELECT switch.

In this way, the desired tone will be preset in one of the five acoustic memory positions. To preset four other desired tone settings, perform the same operations.

To recall the memorized tone setttings, press the ACOUSTIC SELECT switch to select the desired memory position. In this way, five different tone settings can be preset and recalled in the five positions of the acoustic memory.

⑦ STATION NAME switch

This switch is used when inputting station names (see page 21). Press again to cancel this mode.

⑧ AUTO/MANUAL TUNING selector switch

This switched is used to select the tuning mode. The TUNING AUTO indicator lights when the AUTO tuning mode has been selected. The TUNING MANUAL indicator lights when the MANUAL tuning mode has been selected (see page 19).

AUTO tuning

When the – or + TUNING switch is pressed, the receiver automatically scans the broadcast station frequencies. When a broadcast is detected, the scanning stops at that frequency.

NOTE:

Pressing the TUNING switch (– or +) while scanning is taking place causes scanning to stop.

MANUAL tuning

This lets you manually tune to particular broadcast frequencies. Each press of the + or – switch raises or lowers the frequency by one tuning step. For continuous scanning, keep the switch depressed, then release it to stop scanning.

⑨ DIRECT ACCESS TUNING switch

When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency. Press again to cancel this mode.

If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low (see page 19).

⑩ FM MODE AUTO/MONO selector switch

Use to select the auto stereo mode or monaural mode when listenig to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

Auto stereo mode:

Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This switch has no effect on reception of AM broadcasts.

⑪ TUNING switches

+ : Performs tuning from the currently displayed station frequency in ascending frequency order.

– : Performs tuning in order to descending frequencies.

⑫ REAR LEVEL (–, +) switches

Operate only when the surround mode is on.

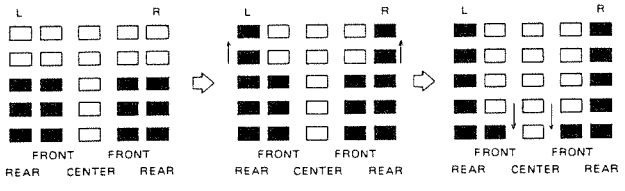
These switches are used to preset the sound level difference between the front and surround speakers. In this way, after presetting the difference, the overall volume of the front and surround speakers can be changed using the MASTER VOLUME control, while still maintaining the sound volume differential.

– : Surround speaker volume is reduced.

+ : Surround speaker volume is increased.

Press – and + together to restore front and surround to the default volume balance setting.

Exanple: If press and keep the "+" switch.



⑬ MUTING switch

Press to temporarily cut off the sound volume. The display section MUTING indicator will flash. When pressed again, the sound will return to its previous level.

⑭ BALANCE switches

Use to adjust the sound volume balance between left and right speakers.

L: Press to decrease the sound on the right side.

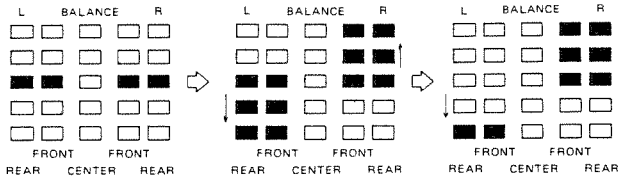
R: Press to decrease the sound on the left side.

Press L and R together to bring the volume balance back to center.

NOTE:

The left-right sound volume balance cannot be adjusted independently on the front and surround speakers.

Exanple: If press and keep the "R" switch.

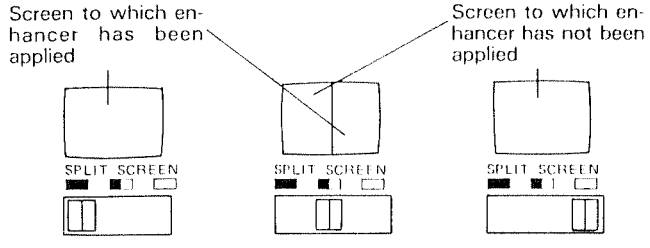


⑮ MASTER VOLUME control

Use to simultaneously adjust the sound volume from the front and surround speakers.

⑯ SPLIT SCREEN control

This control allows you to freely control the area of enhanced picture (on right side of screen) and original picture (non-enhanced, on left side of screen) by means of a vertical line dividing the screen into two stations.


Screen to which enhancer has been applied
Screen to which enhancer has not been applied
SPLIT SCREEN
SPLIT SCREEN
SPLIT SCREEN

NOTE:

This line is not output from the VCR (VCR1 and VCR2) VIDEO OUT jacks. As a result, the split screen image is not recorded; the recorded image will be entirely that produced by the enhancer function.

⑰ ENHANCER control

When performing tape copying with a VCR, some deterioration in image quality occurs normally. This control allows compensation for this deterioration in image quality by emphasizing image detail.

NOTE:

The ENHANCER control functions to suppress image deterioration, but will not improve image quality beyound its original state.

⑱ VIDEO ENHANCER switch

Turns the built in video enhancer on and off. When it is ON, the ENHANCER control can be used to sharpen the playback video image. Using the SPLIT SCREEN function will enable you to compare the enhanced and original (unenhanced) images.

⑲ SURROUND Mode Selector Switches

OFF:

To cancel the surround function.

STADIUM:

Ideal for sports broadcasts, etc.

SIMULATED SURROUND:

Gives concert-hall presence to monaural sound (AM, TV, etc.).

DOLBY SURROUND:

Select this setting when watching video tapes or video discs bearing the DD DOLBY STEREO or DD DOLBY SURROUND mark.

⑳ PHONES jack

Connect the plug on your headphones to this jack. To listen to a program through the headphones, set both SPEAKERS A and B switches to the OFF position.

㉑ DELAY TIME switch

Operates only when the surround mode is ON.

Switches to sorround delay time in three steps. For DOLBY SURROUND, 20ms is standard.

15ms → 20ms → 30ms

㉒ SPEAKERS switches (A, B, REAR) ▙ OFF ▂ ON

ON/OFF switches for the A, B and REAR (surround) speaker systems.

㉓ VIDEO SIGNAL SELECTOR switch

When recording simulcast programs, the recorded image can be selected from among VCR1, VCR2 and VDP.

VCR1→VCR2→VDP→OFF

The current setting is shown by an indicator on the display section.

㉔ BASS control switches
Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the − switch to decrease it.
The TONE indicator appears on the display section.
When both switches (+, −) of the BASS control are pressed simultaneously, the bass response will be set to the flat (normal) condition.

㉕ TREBLE control switches
Use to adjust the high-frequency level. Press the + switch to increase high-frequency level, and the − switch to decrease it.
The TONE indicator appears on the display section.
When both switches (+, −) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.

㉖ Audio/Video INPUT SELECTOR switches
VCR1: Press when performing playback on a VCR unit.
VCR2: Press when performing playback on a second VCR unit.
VDP/CDV: Press when performing playback on a video disc player (VDP) or CDV player.
TAPE1/DAT1: Press when performing playback on a DAT or tape deck.
TAPE2/DAT2 MONITOR: Press when performing playback on a second tape deck or second DAT and when monitoring recording.
CD: Press when playing compact discs on a CD player.
TUNER: Press when listening to radio broadcasts.
PHONO: Press when playing records on turntable.

㉗ MEMORY SCAN switch
Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another beginning with station no. 1, for approximately 5 seconds each.
The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time.
Station frequencies not assigned station numbers in the memory are skipped.

㉘ MEMORY switch
When the unit is in the frequency display mode, pressing this switch will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.
This switch is also used to input station names (see page 21).

㉙ BAND selector switches
FM: Press for FM reception.
AM: Press for AM reception.

㉚ STATION CALL switches
Each preset can hold any AM or FM station.
- These switches are used to preset and recall desired broadcasting stations, FM AUTO/MONO mode.
  The rear panel STATION PRESET 10/30 switch determines the number of possible presets per STATION CALL switch.
  10: One per switch.
  30: Three per switch.
  If you press the [2] key:
  - One time — station 2 is selected.
  - Two times — station 12 is selected.
  - Three times — station 22 is selected.

NOTE:
Pressing a BAND selector switch or STATION CALL switch will select TUNER as the source, regardless of what other listening source or function was selected.

[DISPLAY SECTION]

① LEVEL/BALANCE display

② INPUT SELECTOR

③ TV-ANT indicator
Lights when TV mode is selected with the TV ANT switch.

④ MUTING indicator

⑤ TAPE 2 indicator
Lights when the INPUT SELECTOR is set to TAPE 2 MONITOR ON.

⑥ STATION No. display
Shows the channel selected with the STATION CALL switch.

⑦ SCAN indicator
Lights during memory scan operation.

⑧ TUNED indicator
Lights when a station is tuned in during TUNER operation.

⑨ FM MONO indicator
Lights when the FM MONO mode is selected with the FM MODE switch.

⑩ STEREO indicator
Lights when a stereo FM broadcast is being received.

⑪ Frequency display

⑫ Surround mode indicators

⑬ DELAY TIME display
Shows the delay time during surround operation.

⑭ VIDEO SIGNAL SELECTOR indicators
Shows the video component selected with the VIDEO SIGNAL SELECTOR switch.

⑮ ENHANCER indicator
Lights when the video enhancer is on.

⑯ SIMULATED STEREO indicator

⑰ VCR NOISE FILTER indicator
Lights when the VCR NOISE FILTER switch is in the ON position.

⑱ MANUAL TUNING indicator
This indicator lights when in the manual tuning mode.

⑲ DIRECT TUNING indicator
This indicator lights when in the direct access-tuning mode.

⑳ AUTO TUNING indicator
This indicator lights when in the auto tuning mode.

㉑ SLEEP timer indicators
Shows the SLEEP timer setting (the length of time from the set time to the point at which power will switch off). (The sleep timer can be operated via the remote control.)

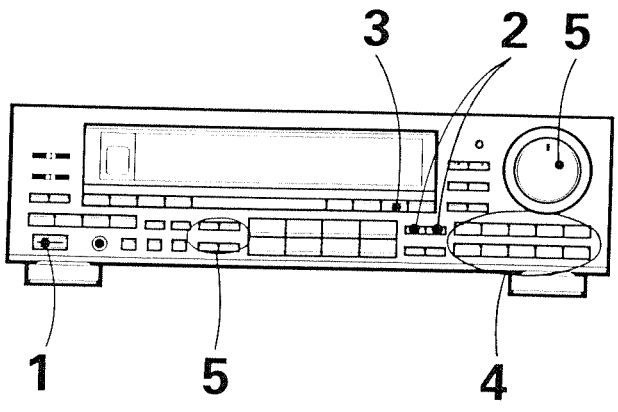
㉒ MEMORY indicator

㉓ TONE level meter
Shows the settings of the BASS and TREBLE switches.

㉔ ACOUSTIC display
Shows the setting of the ACOUSTIC SELECT switch.

BROADCAST RECEPTION

DIRECT-ACCESS TUNING



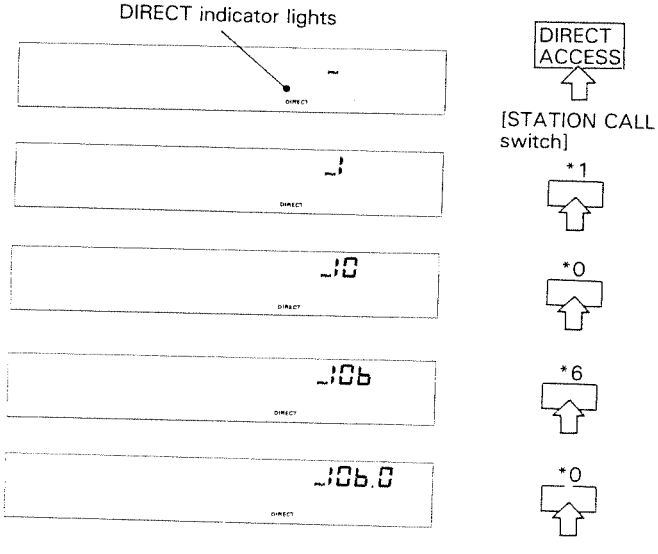
When you know the frequency of the desired station, the frequency can be input directly using the STATION CALL (number) switches in the following way:

1. **Press the POWER switch to the ON position.**

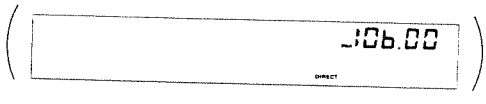
NOTE:
Be sure to turn the TAPE2/DAT2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. **Select either FM or AM using the BAND selector.**
3. **Press the DIRECT ACCESS switch.**
4. **Input the desired station frequency using the STATION CALL switches.**

Example 1: To receive FM 106.00MHz



- When the CHANNEL STEP switch is set to FM 100kHz, the tuning operation is completed and reception begins.



- When the CHANNEL STEP switch is set to FM 50kHz:

Once the station frequency has been input, the receiver tunes in that frequency. If the input frequency falls below the lower or higher limit of the reciever's receivable frequency range (FM: 87.5MHz – 108MHz; AM: 530kHz – 1,700kHz or 531kHz – 1,602kHz) "LOWER" or "UPPER" is displayed, indicating that the frequency which has been input cannot be tuned in.

6. **Adjust the sound volume and tone as desired.**

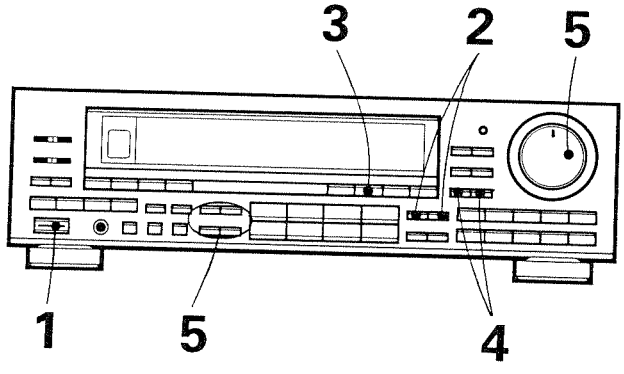
To cancel frequency input

Direct access is canceled when the DIRECT ACCESS switch is pressed again.
Under the following conditions direct access is canceled and the unit returns to the condition in effect before direct access was selected: ① If there is no key input for about five seconds after the DIRECT ACCESS switch was pressed. ② If more than about eight seconds elapse between number input.

Notes regarding FM or AM direct access tuning

- When the CHANNEL STEP switch is set to the AM 10kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.

AUTO OR MANUAL TUNING



AUTO tuning:
Auto tuning is convenient when you do not remember the frequency of a desired station, or when you wish to find stations that you do not normally listen to.
MANUAL tuning:
This is the "normal" tuning mode. Each time the TUNING switch "+" or "–" is pressed, the tuning frequency changes by one step, allowing you to find stations manually.

1. **Press the POWER switch to the ON position.**

NOTE:
Be sure to turn the TAPE2/DAT2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. **Use the BAND selector to choose either FM or AM.**

For AUTO tuning:

3. **Set the AUTO/MANUAL switch to the auto-tuning mode.**
   - In the Auto-Tuning mode, the AUTO indicator will light.
4. **Press the "+" or "–" switch of the TUNING switches.**
   - Pressing "+" causes scanning to take place in the direction of increasing frequency. Pressing "–" causes scanning to take place in the direction of decreasing frequency.
   - When a station is received, scanning will stop (the [TUNED] indicator lights). If you wish to receive a different station, press the TUNING switches "+" or "–" again.
   - When the received station is broadcasting a program in FM stereo, the [STEREO] indicator will light.
   - Pressing either of the TUNING (–, +) switches during auto tuning causes tuning to stop at the current frequency.

For MANUAL tuning:

3. **Set the AUTO/MANUAL switch to the manual tuning mode.**
   - When in the Manual Tuning mode, the MANUAL indicator will light.
4. **Press the "+" or "–" switch of the TUNING switch as necessary to set to the frequency of the desired station.**
   Each time the switch is pressed, the tuning frequency will change by one step in the direction corresponding to the switch pressed. When pressed continuously.
   - When a station is received, the [TUNED] indicator will light.
   - When the received station is broadcasting a program in FM stereo, the [STEREO] indicator will light.

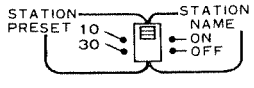
5. **Adjust the volume and tone as desired.**

NOTE:
- *When Auto Tuning is used, correct reception may not be possible for very distant stations or stations with very weak signals. In this event, Manual Tuning is recommended.*
- *The [TUNED] indicator may not light with broadcasts received over long distances, or when the broadcast signals are extremely weak.*

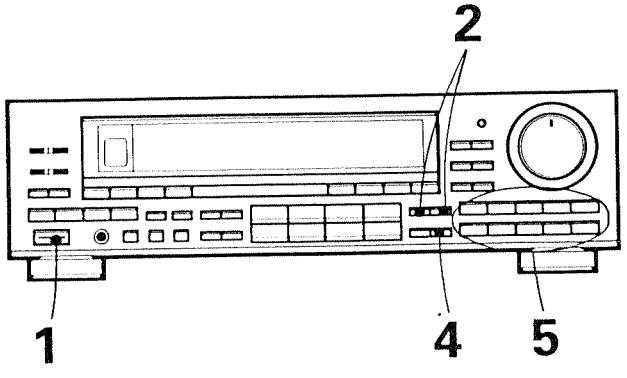
PRESET TUNING

FREQUENCY PRESETTING

Set the rear panel STATION PRESET/STATION NAME switch to your desired position.



10: You can store a name for each station at this position, but each STATION CALL switch can store one station (see page 21).
30: Allows three stations per STATION CALL switch (press once, twice, or three times to select).



1. **Press the POWER switch to the ON position.**

NOTE:
Be sure to turn the TAPE2/DAT2 MONITOR switch OFF when listening to AM or FM broadcasts.

2. **Set the BAND selector to either FM or AM.**

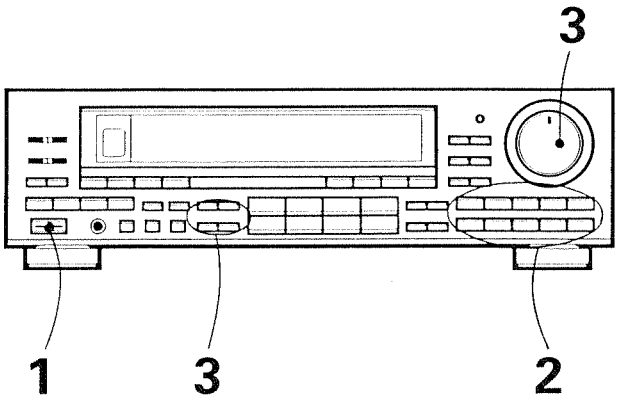
3. **Tune in the desired station.**
   - See the section "DIRECT ACCESS TUNING" for information on reception using the Direct Access Tuning mode.
   - See the section "AUTO TUNING" for information on reception using the Auto Tuning mode.
   - See the section "MANUAL TUNING" for information on reception using the Manual Tuning mode.

In addition to station frequencies, the FM MODE (AUTO/MONO) can also be preset.

4. **Press the MEMORY switch.**
5. **Press the STATION CALL switch into which you wish to preset the station.**
   - Use the STATION CALL switches (*1 – *9, *0) to select a preset channel. When the rear panel STATION PRESET/STATION NAME switch is set to 30, then one press selects the 1 – 10 range, two presses 11 – 20, and three presses 21 – 30.
     (Example) If you press key [*3]:
     One time – STATION 3
     Two times – STATION 13
     Three times – STATION 23
     Press a STATION CALL switch within two seconds.

6. **Repeat steps 2 to 5 to preset additional stations.**
   If the rear panel STATION PRESET/STATION NAME switch is set to 30, then a total of 30 AM and FM stations may be preset. When you store a new preset, it takes the place of the previously stored station (if any).

LISTENING TO BROADCASTS USING PRESET TUNING



1. **Press the POWER switch to the ON position.**
2. **Press the STATION CALL switch into which the desired station has been preset.**
   - When the INPUT SELECTOR is set to a function other than TUNER, it will switch to the TUNER function automatically if one of the STATION CALL switches is pressed.

Tuning can be performed simply and accurately following the above procedure.

3. **Adjust the volume and tone as desired.**

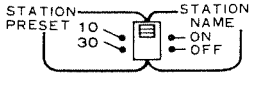
NOTE:
The contents of the STATION CALL switch will be preserved for several days, even if the receiver power cord is unplugged.
If a preset station has been erased, preset it again.

Last station memory

When the POWER switch is pressed to turn power on, the last station received before the power was previously turned off will be tuned in again.
When the power is ON, if one of the BAND selector switches is pressed, the last station received before the BAND selector switch was previously pressed will be tuned in again.

DISPLAYING STATION NAMES

This is only possible when the rear panel STATION PRESET/ STATION NAME switch is set to 10.

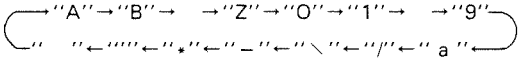


If desired, you may memorize an optional name or station call letters and display them in place of the station frequency. In this case, use the call-letter mode.

Memorizing with the call-letter mode.

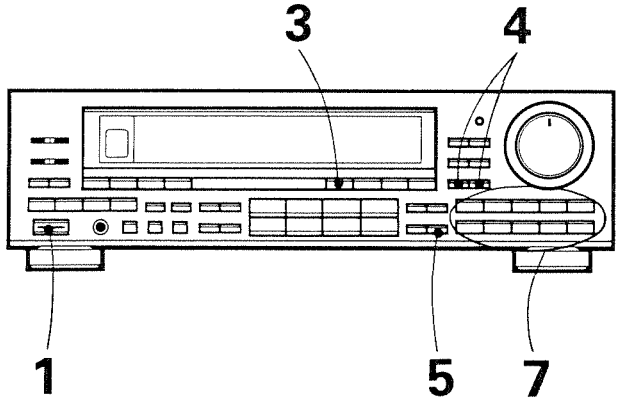
- A maximum of five characters can be memorized.

1. **Press the POWER switch to the ON position.**
2. **Tune in the desired station.**
   - If the desired station already has a STATION CALL NO. assigned, select it using the appropriate STATION CALL switch. (In this case step 7 can be omitted.)
   - If you wish to preset the station and input the station call letters, use DIRECT ACCESS TUNING or the TUNING switches to select the desired station. In this case step 7 should not be omitted.
3. **Press the STATION NAME switch to put the receiver in the call-letter mode.**
4. **Press the TUNING (+, –) switches to select the desired characters.**
   - When the "+" of the TUNING switch is pressed, the characters will change in order, in the direction of the arrow. When the "–" is pressed, the characters will change in reverse direction of the arrow.



5. **Press the MEMORY switch.**
   - The first character selected will be memorized and the operation will move to the next character. In this case, the same character as that previously set will be displayed flashing.
6. **By repeating steps 4 and 5 up to four characters can be memorized.**
   - If you used one of the STATION CALL switches to tune in the broadcast, the station call-letters you just input will be memorized along with the station no.
7. **(If there is no STATION CALL NO.)**
   Use the appropriate STATION CALL switch to select the STATION CALL NO. (1 - 10) you wish to memorize.
   - Both the number you preset with the STATION CALL switches and the station call letters are memorized.

NOTE:
- *If the INPUT SELECTOR switches are pressed, the setting procedure will be interrupted and setting will be aborted.*
- *Any stored station names will be erased if the rear panel STATION PRESET/STATION NAME switch is changed to the "30" position (but the preset frequencies are not erased). On the other hand, preset frequencies 11—30 will be erased if you preset stations at the "30" position and then switch to "10" to input station names.*



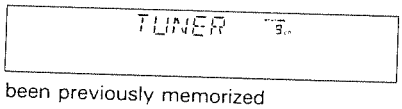
DISPLAYING STATION NAMES

Example: To set the name "JAZZ" into STATION CALL switch CH 9.

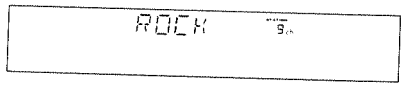
Select CH 9

*9

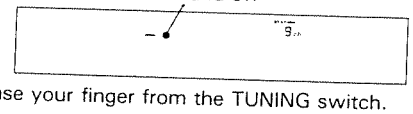
When no station name has been previously memorized



When a station name has been previously memorized

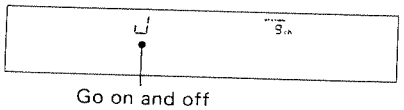


STATION NAME



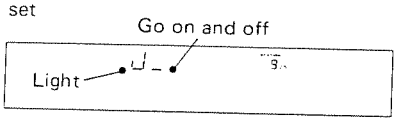
When "J" appears, release your finger from the TUNING switch.

TUNING − +



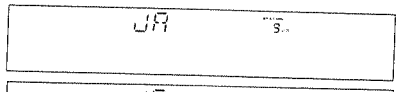
When one character is set

6 → MEMORY

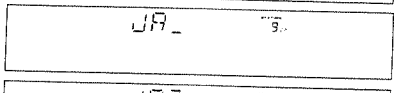


Repeat the operation for the other characters.

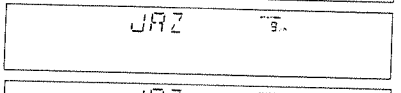
7 → TUNING "+" side



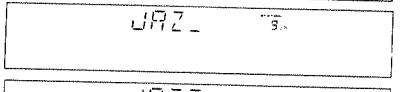
MEMORY



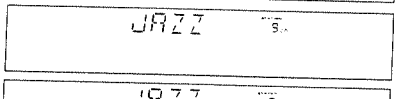
TUNING "+" side



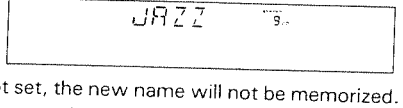
MEMORY



TUNING "+" side

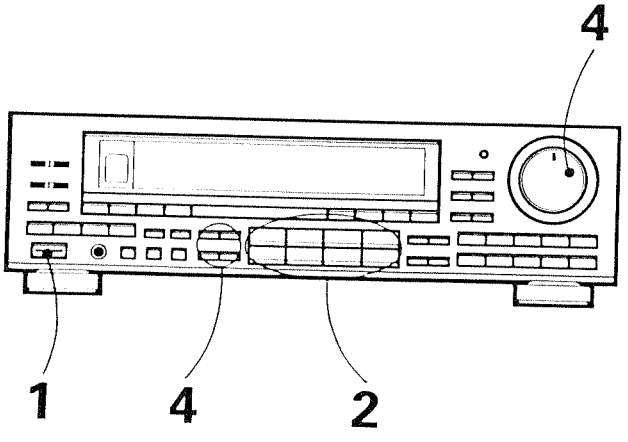


MEMORY



If all four characters are not set, the new name will not be memorized.
When there are no characters to input, use the space (" ").
If frequencies are not yet stored in STATION CALL switches, tune in a station using direct access or manual tuning, and then store it in one of the STATION CALL switches.

LISTENING TO OTHER MUSIC SOURCES

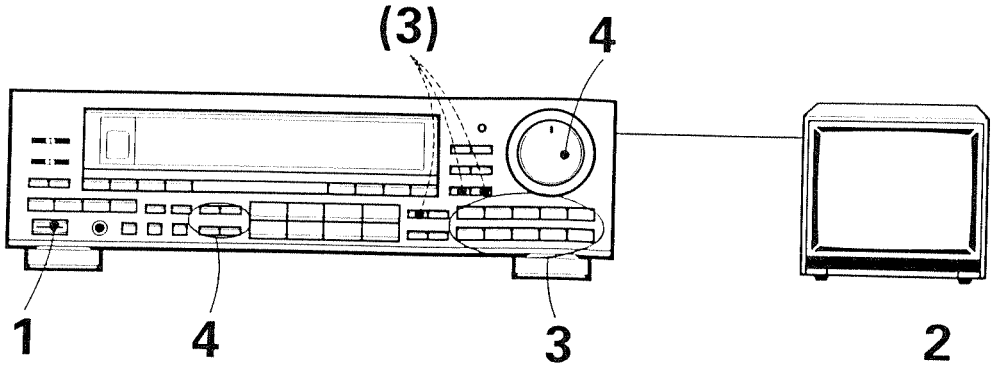


Program Source	INPUT SELECTOR Switch
To listen to records.	PHONO
To listen to compact discs.	CD
To listen to a tape on the tape deck (or digital audio tape deck) connected to TAPE 1/DAT 1 jacks.	TAPE 1/DAT1
To listen to a tape on the tape deck (or digital audio tape deck) connected to TAPE 2/DAT 2 jacks.	TAPE 2/DAT2 MONITOR
To watch a video cassette tape on the VCR connected to VCR 1 jacks.	VCR 1
To watch a video cassette tape on the VCR connected to VCR 2 jacks.	VCR 2
To watch a video disc on a video disc player, or to watch a CDV on a CDV player.	VDP/CDV

* Before selecting an INPUT SELECTOR switch, turn TAPE 2/DAT2 MONITOR OFF.

1. **Press the POWER switch to the ON position, and turn on the power to the other audio components you wish to use.**
2. **Use the INPUT SELECTOR switches as required to select the desired program source.**
3. **Operate the appropriate audio/video component to play back the program source.**
4. **Adjust the volume and tone controls as desired.**

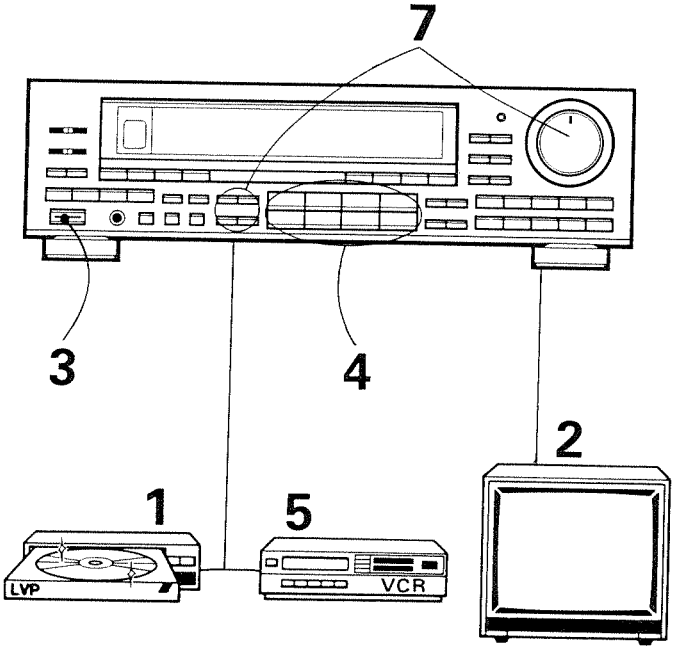
RECEIVING FM SIMULCAST TV PROGRAMS



By combining a TV set and a VCR (or TV tuner), you can receive FM simulcast TV programs (stereo TV sound transmitted from an FM radio station) while viewing the video portion on your TV.

1. Press the POWER switch to the ON position, and turn on the power to the other components to be used.
2. Select the desired TV program with the TV set.
3. Tune in the desired FM simulcast TV program on the receiver.
4. Adjust the volume and tone controls as desired.

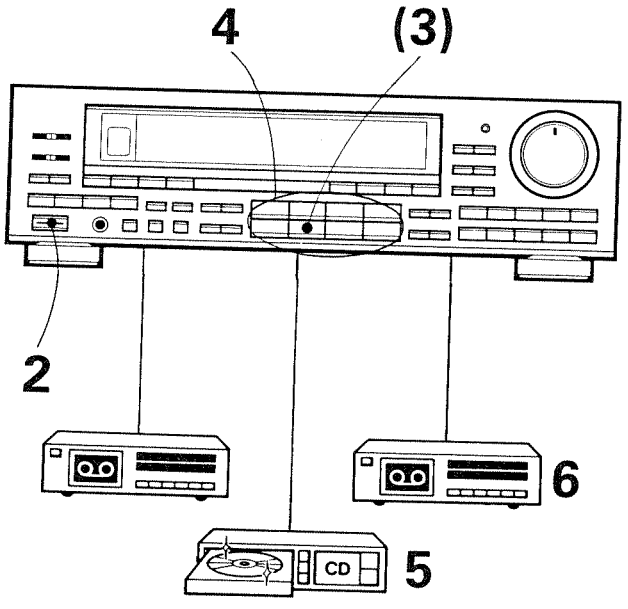
TO WATCH VIDEO PROGRAMS



1. Connect the video components to the VCR 1, VCR 2, or VDP/CDV jacks.
2. Connect the TV set,
   - When using a normal TV set:
     Connect RF MODULATOR JA-RF5 (sold separately) to the receiver's VIDEO OUT TO RF MODULATOR terminal. Connect the JA-RF5 and the TV antenna terminal.
   - When using a TV set equipped with a video input terminal or a monitor TV:
     Connect the receiver's VIDEO OUT TO MONITOR TV 1 (or 2) terminal and the TV (or monitor TV) video input terminal).
3. Press the POWER switch to the ON position, and turn on the power to the other components used.
4. Set the INPUT SELECTOR switch to the appropriate video component to be played back.
5. Play back the video component.
6. Operate the TV set to display the playback picture.
   - Set the TV set's channel to the same open channel as selected on the RF modulator.
   - When using a TV set equipped with video input terminals, set to the video input playback mode.
7. Adjust the volume and tone controls as desired.

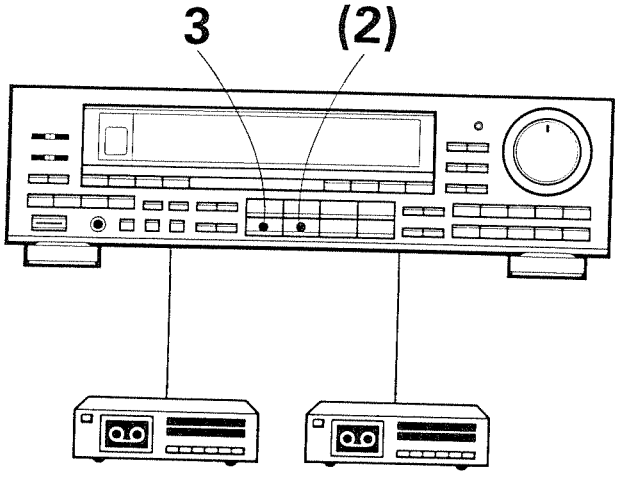
RECORDING WITH A TAPE DECK

RECORDING



1. **Connect the audio source component while referring to the sections "AUDIO SYSTEM CONNECTIONS" and "VIDEO SYSTEM CONNECTIONS."**
2. **Press the POWER switch to the ON position.**
3. **If the TAPE 2/DAT2 MONITOR switche are ON, press to turn OFF.**
4. **Use the INPUT SELECTOR switch to select the desired program source.**
   - When recording to AM or FM broadcasts, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
5. **Play the desired program source (record, compact disc, etc.).**
6. **Begin recording by following the operating procedures for the applicable tape deck.**
   - The volume, balance and tone controls have no effect on the recording.

COPYING TAPES



The following operation is TAPE1/DAT1 → TAPE2/DAT2 copying. TAPE2/DAT2 → TAPE 1/DAT1 copying is not possible.

1. **Connect the tape deck to be used for playback to the TAPE1/DAT1 jacks, and the tape deck for recording to the TAPE2/DAT 2 jacks.**
2. **If the TAPE2/DAT2 MONITOR switch is ON, press to turn OFF.**
3. **Press the TAPE1/DAT1 switch.**
   - Set the playback deck to the playback mode and simultaneously set the recording deck to the recording mode.
   - If the recording tape deck is equipped with a monitoring function, the recording can be monitored by pressing the TAPE2/DAT2 MONITOR switch to the ON position.

Tape monitoring

When recording is performed on a tape deck equipped with three heads, the recorded sound can be monitored through the speaker system by pressing the TAPE2/DAT2 MONITOR switch. In this case, both recording and playback connections must be made.

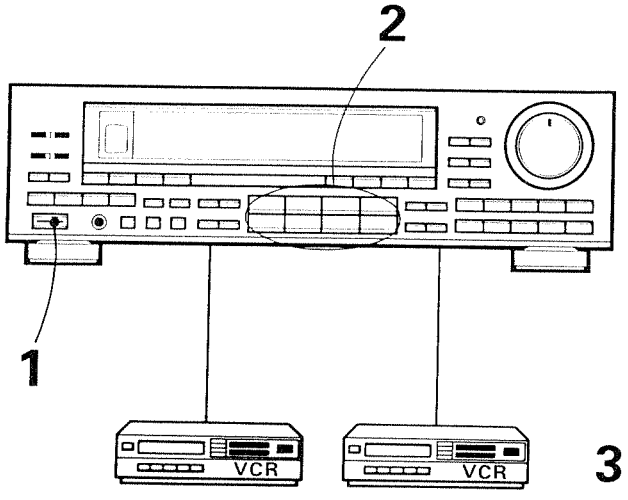
NOTE:

If a two-head open-reel or cassette deck is used, monitoring of the recorded sound will not be possible, even if the TAPE2/DAT2 MONITOR switch is pressed. It will still be possible, however to listen to the original program source sound.

Hi-Fi VCR RECORDING

Refer to the connection procedures on pages 7 and 11, and refer to the Hi-Fi VCR's Operating Instructions regarding proper operation procedures. Recording can be performed on both VCR 1 and VCR 2.

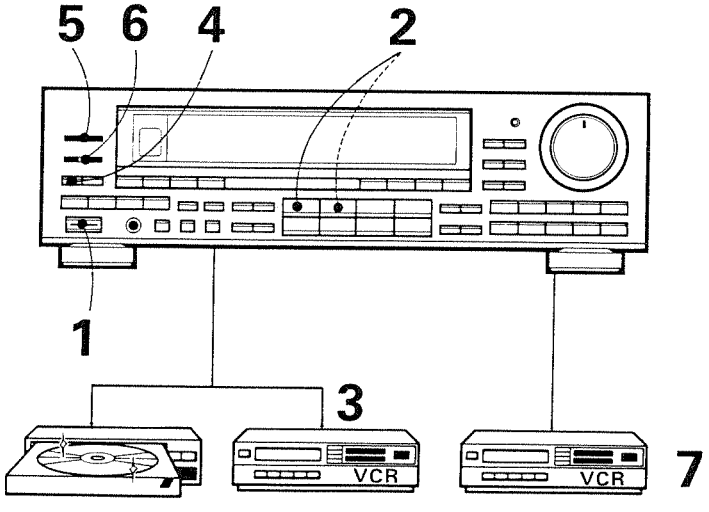
RECORDING SOUND ON A VIDEO TAPE



1. **Press the POWER switch to the ON position, and turn on the power to the Hi-Fi VCR.**
2. **Use the INPUT SELECTOR switch to select the desired program source.**
   - When recording to AM or FM broadcasts, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
3. **Insert a video cassette for recording into the Hi-Fi VCR and adjust the recording level.**
4. **Start the program source and set the VCR to the recording mode.**
   - For details, consult the Operating Instructions of the VCR for the recording mode.
   - The volume, balance, and tone controls have no effect on the recording.

NOTE:
Recording cannot be performed on a VCR connected to the VDP/CDV jacks.

VIDEO TAPE COPYING



Copying can be performed in either direction between VCR1 and VCR2. (VCR1 ⇆ VCR2)
In addition, two identical copies can be made of a program source connected to the VDP/CDV jacks. (VDP/CDV → VCR1, VCR2)

1. **Press the POWER switch to the ON position, and turn on the power to the connected VCR (VDP, CDV player).**
2. **Set the INPUT SELECTOR switch to the VCR1, VCR2 or VDP/CDV to be used for playback.**
3. **Set the playback VDP/CDV or VCR to the playback mode.**

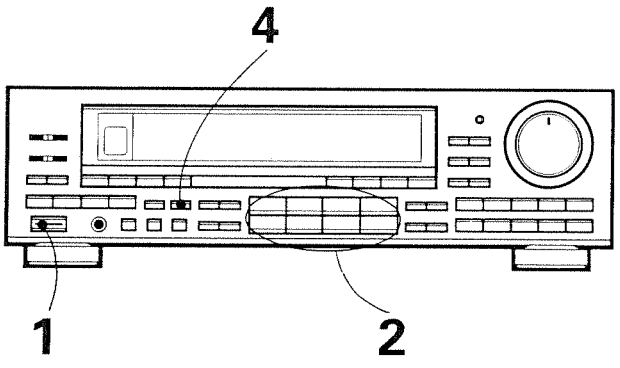
When not using the enhancer function:

4. **Set the VIDEO ENHANCER switch to OFF.**
   - The ENHANCER indicator will go out.
7. **Set the recording VCR to the recording mode.**

When using the enhancer function:

4. **Set the VIDEO ENHANCER switch to ON.**
   - The ENHANCER indicator will light.
5. **Set the SPLIT SCREEN control so that the line is near the middle of the screen.**
6. **Use the ENHANCER control to produce the clearest possible image when the copied video tape cassette is played back.**
   - Perform the adjustment while comparing the original picture (on left of screen) and the enhanced image (on right of screen). Use the control with care since if too much enhancer effect is applied, a poorer image may result.
   - Adjust the image while using the SPLIT SCREEN control to divide the enhanced and original images at various places on the screen.
7. **Set the recording VCR to the recording mode.**

USING THE VIDEO SIGNAL SELECTOR



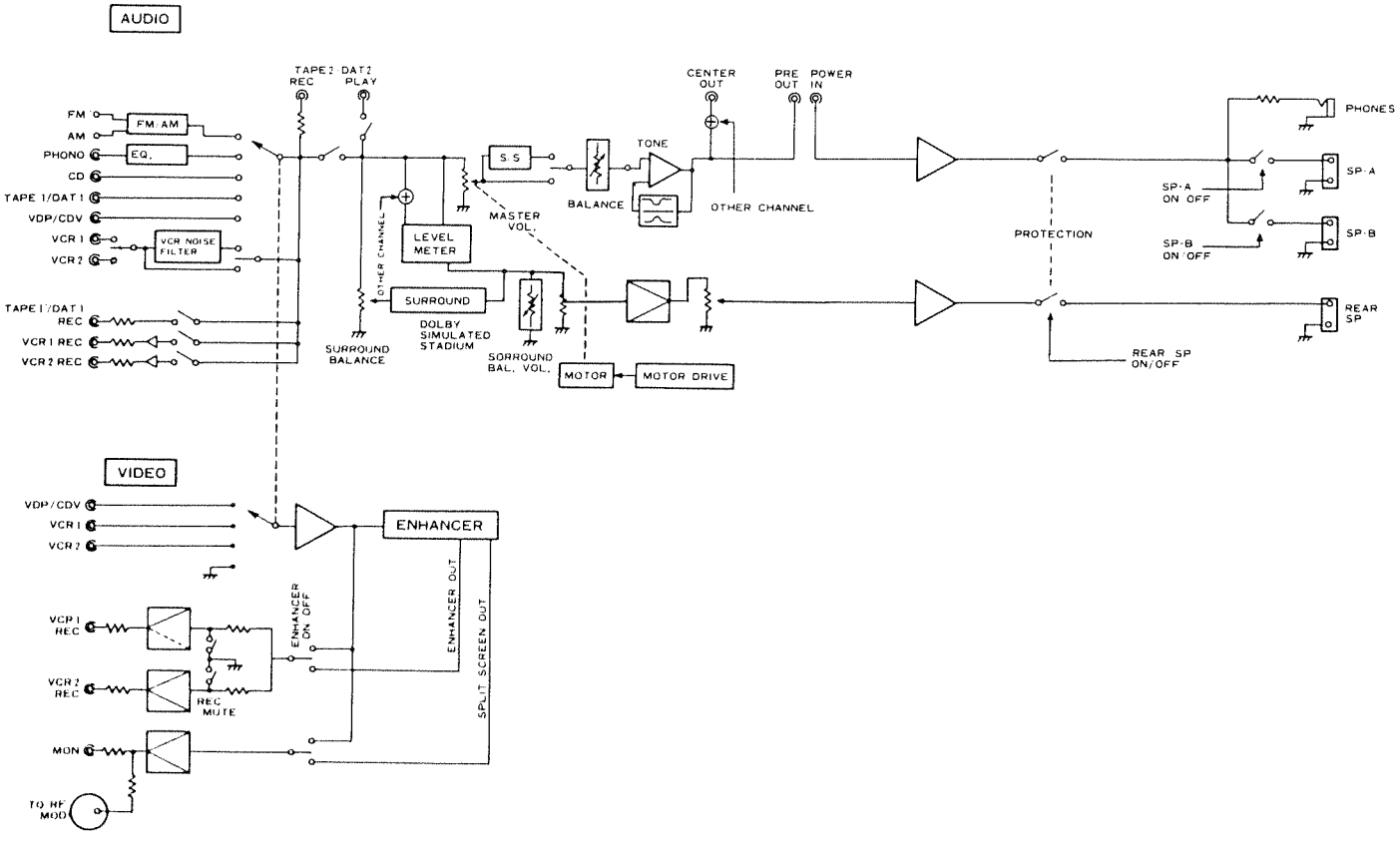
This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to play back and record video images different from the playback sound source.

1. **Press the POWER switch to the ON position, and turn on the power to the other components used.**
2. **Set the INPUT SELECTOR switch to the audio source which is to be recorded.**
   - When listening (or recording) to AM or FM broadcast, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto or Manual or Direct Access tuning.
3. **Insert a video cassette tape into the VCR to be used for recording.**
4. **Set the VIDEO SIGNAL SELECTOR switch to the video component (VCR1, VCR2 or VDP) used for playback.**
5. **Set the recording VCR to the recording pause mode.**
   - When using the ENHANCER function, see steps 4—6 of the section "VIDEO TAPE COPYING: When using the enhancer function."
6. **Start playing the desired audio program source.**
7. **Cancel the recording pause mode of the recording VCR.**

CAUTION:

If you must operate the VIDEO SIGNAL SELECTOR switch during recording, do so after setting the recording VCR to the pause mode. If the switch is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which the switch is operated.

BLOCK DIAGRAM



HINTS FOR BETTER RECEPTION

EXTERNAL FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:
Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna or an outdoor antenna should be installed.

INDOOR AM ANTENNA

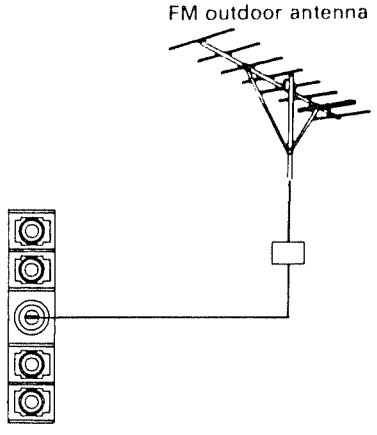
Use a vinyl-insulated wire (5—6 m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

OUTDOOR AM ANTENNA

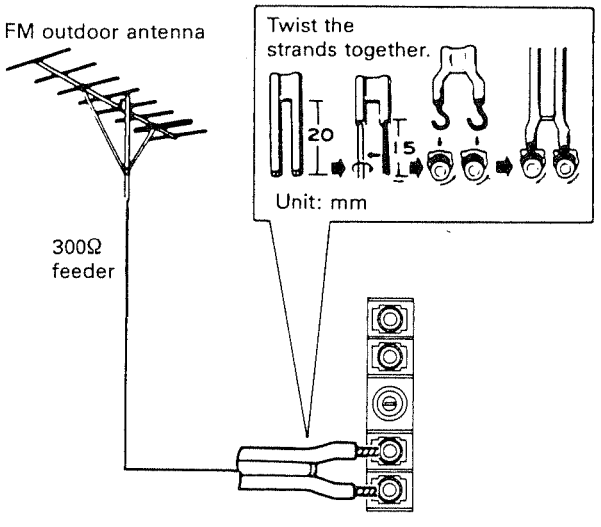
If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl-insulated wire should be installed outside and fixed in place.

NOTE:
Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

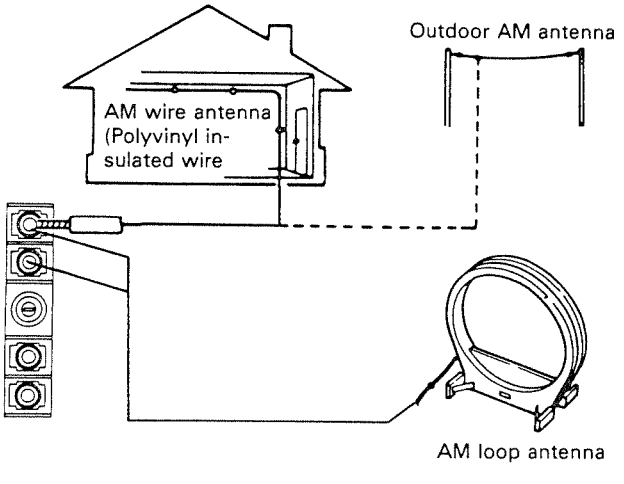
Connecting the coaxial cable



Connecting the 300Ω feeder



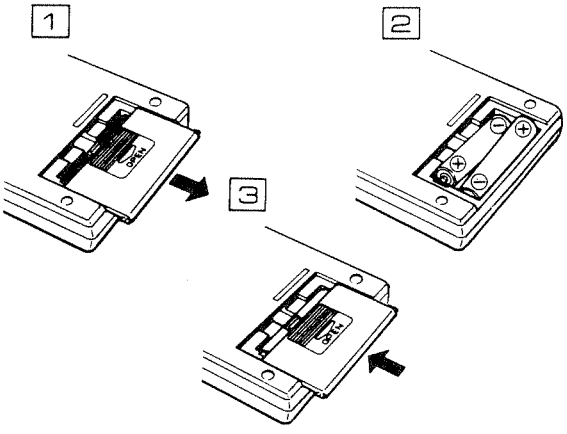
AM antenna connection



REMOTE CONTROL OPERATION

LOADING BATTERIES

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.
2. Take out the two supplied batteries (R03/UM-4), and insert them into the battery compartment in accordance with the indications in the compartment.
3. Close the cover of the battery compartment.



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

A.
Always insert batteries into the battery compartment correctly matching the positive (+) and negative (−) polarities, as indicated inside the compartment.

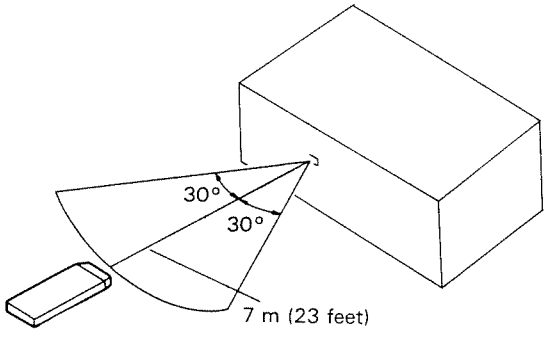
B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

D.
Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the caution labels affixed to them.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.



Battery Replacement

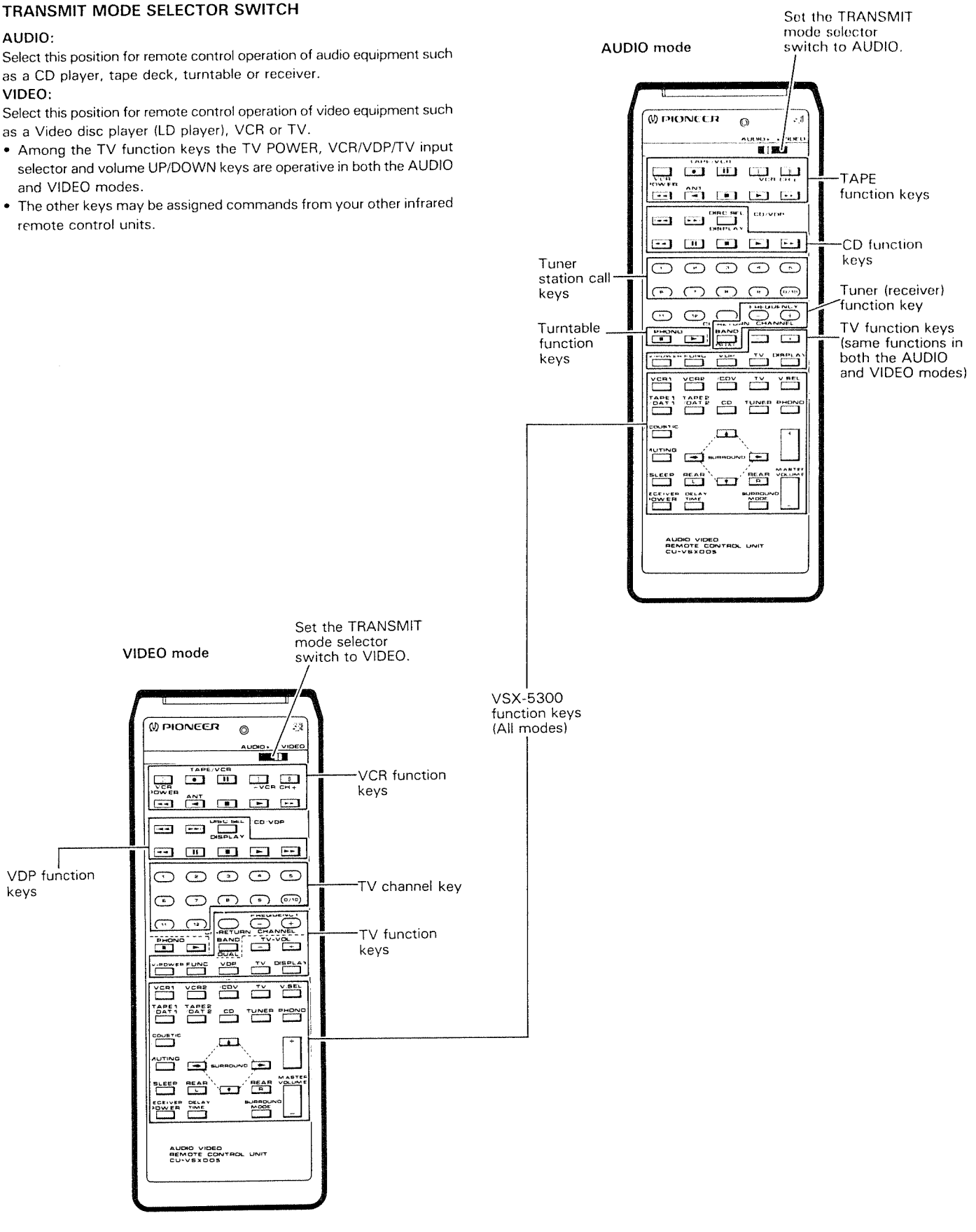
When the batteries have run out, the transmit indicator will not illuminate even when a key is pressed. Be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately.
Also, be sure to always use the specified batteries (R03/UM-4 batteries).

TRANSMIT MODE SELECTOR SWITCH

AUDIO:
Select this position for remote control operation of audio equipment such as a CD player, tape deck, turntable or receiver.

VIDEO:
Select this position for remote control operation of video equipment such as a Video disc player (LD player), VCR or TV.

- Among the TV function keys the TV POWER, VCR/VDP/TV input selector and volume UP/DOWN keys are operative in both the AUDIO and VIDEO modes.
- The other keys may be assigned commands from your other infrared remote control units.


AUDIO mode
Set the TRANSMIT mode selector switch to AUDIO.
TAPE function keys
CD function keys
Tuner station call keys
Tuner (receiver) function key
Turntable function keys
TV function keys (same functions in both the AUDIO and VIDEO modes)
VSX-5300 function keys (All modes)
VIDEO mode
Set the TRANSMIT mode selector switch to VIDEO.
VCR function keys
VDP function keys
TV channel key
TV function keys

■ TAPE DECK OPERATION

AUDIO • • VIDEO

Set the TRANSMIT mode selector switch to AUDIO.

TAPE function keys

○ **(REC MUTE) key:**
For insertion of silent spaces between selections.

● **(REC) key:**
Selects the recording mode.

(PAUSE) key:
Temporarily stops tape transport. Press again to resume tape transport.

I **(DECK I) key:**
Switches to the deck I functions when using a double cassette tape deck.

II **(DECK II) key:**
Switches to the deck II functions when using a double cassette tape deck.

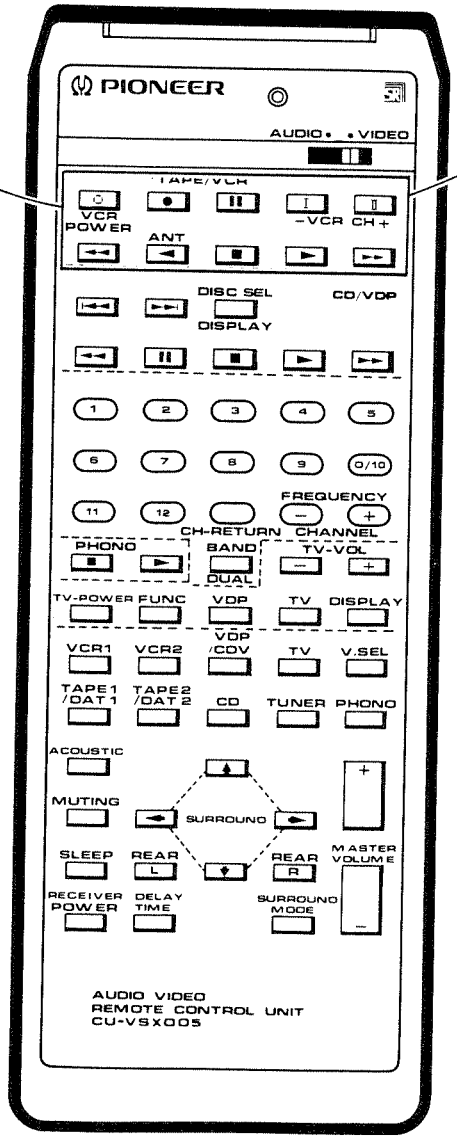
◄◄ **(FF) key:**
Rapidly advances the tape in the direction of the arrow.

◄ **(PLAY) key:**
Selects reverse playback.

■ **(STOP) key:**
Stops the tape transport.

► **(PLAY) key:**
Selects forward playback.

►► **(FF) key:**
Rapidly advances the tape in the direction of the arrow.



■ VCR OPERATION:

Set the TRANSMIT mode selector switch to VIDEO.

AUDIO • • VIDEO

VCR function keys (operation of VCR)

○ **VCR POWER key:**
Switches VCR power ON/OFF.

● **(REC) key:**
Selects the recording mode.

II **(PAUSE/STILL) key:**
Sets pause and still picture.

I **VCR CH – (DOWN) key:**
Shifts channels in descending order.

II **VCR CH + (UP) key:**
Shifts channels in ascending order.

◄◄ **(REW) key:**
Rewinds the tape and allows picture search.

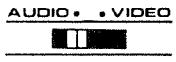
◄ **ANT key :**
This key can be used only for VCRs with a VCR/TV selector.
Toggles the antenna output between VCR to TV.

■ **(STOP) key:**
Stops tape transport.

► **(PLAY) key:**
Selects playback.

►► **(FF) key:**
Rapidly advances the tape and allows picture search.

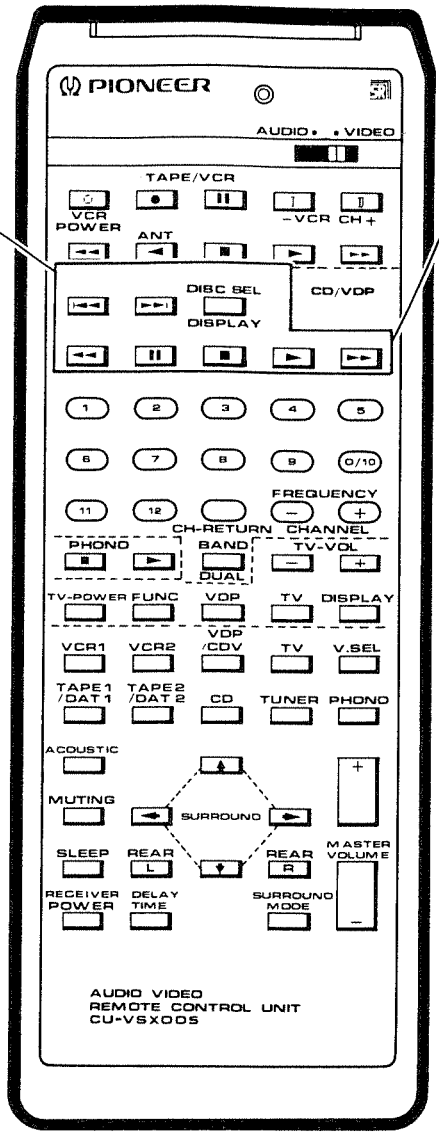
■ CD PLAYER OPERATION



Set the TRANSMIT mode selector switch to AUDIO.

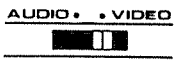
CD Function Keys (Operation of CD player)

- ⏮ **(TRACK SEARCH) key:** Returns to the beginning of the track currently in playing.
- ⏭ **(TRACK SEARCH) key:** Advances to the next track.
  DISC SEL key: Selects the DISC No. (1 to 6) for magazine-type CD players.
- ◄◄ **(MANUAL SEARCH) key:** Selects fast backward.
- ❚❚ **(PAUSE) key:** Pauses playback.
- ■ **(STOP) key:** Stops playback.
- ► **(PLAY) key:** Selects playback.
- ►► **(MANUAL SEARCH) key:** Selects fast forward.



■ VDP OPERATION

Set the TRANSMIT mode selector switch to VIDEO.



VDP function keys (operation of LD player)

- ⏮ **(CHAPTER SKIP) key:** Returns to the beginning of the present chapter.
- ⏭ **(CHAPTER SKIP) key:** Advances to the next chapter.
  DISPLAY call key: Clears the chapter and frame/time displays on the screen.
- ◄◄ **(SCAN) key:** Selects fast backward.
- ❚❚ **(PAUSE) key:** Video and audio are stopped and playback is paused.
- ■ **(EJECT) key:** Playback is stopped when pressed once. Pressing again causes the disc tray to come out.
- ► **(PLAY) key:** Selects playback.
- ►► **(SCAN) key:** Selects fast forward.

■ RECEIVER SECTION OPERATION

V.SEL key:
After pressing the V.SEL key, only the video signal can be changed. The selected audio signal remains as set.

INPUT SELECTOR keys:
Press VCR1,VCR2,VDP/CDV,TV,TAPE1 /DAT1,CD,TUNER or PHONO to select the amplifier input.

TAPE 2 / DAT 2 MONITOR keys:
Press TAPE2/DAT2 to switch between source and monitor.

ACOUSTIC select key:
The acoustic setting changes in the following manner each time this key is pressed

→FLAT→LOUDNESS→
←E←D←C← B←A←

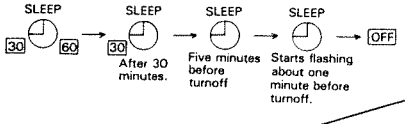
MUTING Key:
Used to temporarily mute the sound. The volume is restored when pressed again.

SLEEP timer key:
Activates the SLEEP timer. The length changes in the following manner each time the key is pressed:

→60→30→OFF

Unit: minutes

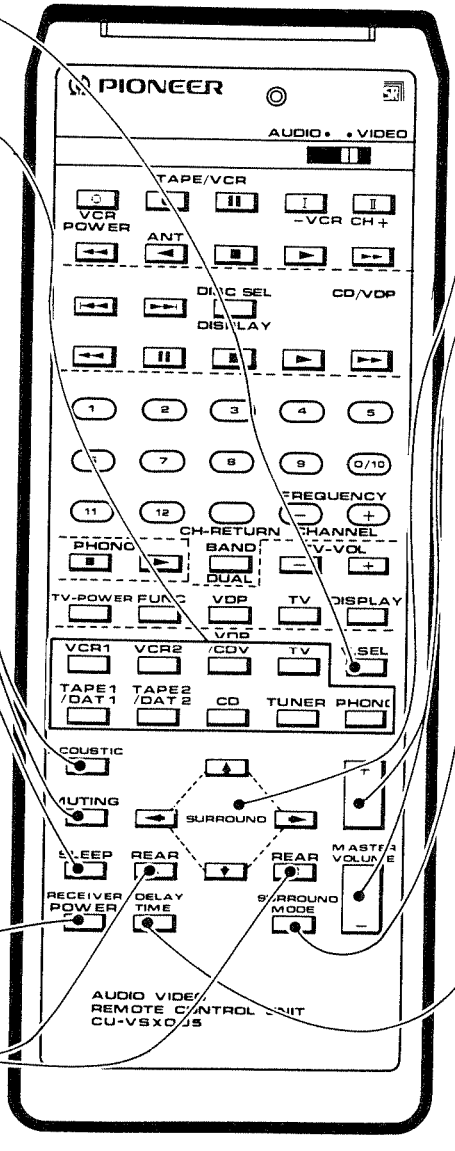
Display appearance if 60 minutes is selected.



RECEIVER POWER key:
Switches the receiver power ON/OFF.

REAR L, R keys:
Adjusts the left/right balance of the surround speakers.
L side ... when sound of R channel is too loud.
R side ... when sound of L channel is too loud.

NOTE:
Input selector TV key does not function with VSX-5300S.



SURROUND keys (↑ ← ↓ →):
The surround area can be set as desired by pressing these four keys.
The left and right keys adjust the left and right level balance. The upper and lower keys adjust the front and surround level balance.

MASTER VOLUME key:
Adjusts the overall (front and surround) volume.

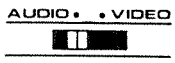
SURROUND MODE key:
The surround mode is switched in the following manner each time the key is pressed:

→STADIUM→SIMULATED SURROUND→
←OFF←DOLBY SURROUND←

DELAY TIME key:
Switches the delay time for surround each time it is pressed.

→15 ms→20 ms→30 ms

■ TUNER SECTION AND TURNTABLE OPERATION



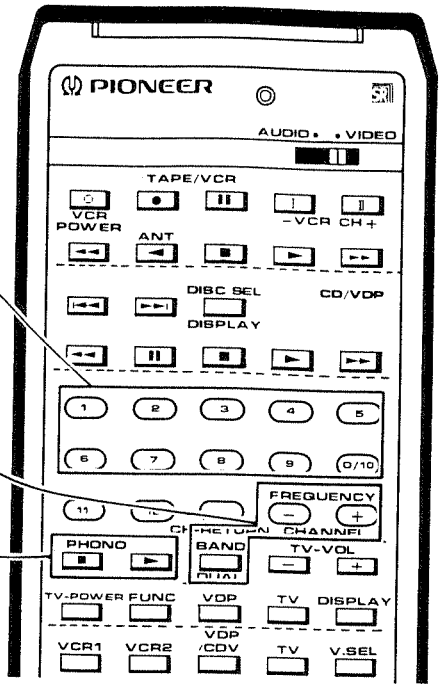
Set the TRANSMIT mode selector switch to AUDIO.

TUNER function keys (operation of FM/AM Tuner)

1 to 0/10 (STATION CALL) keys:
For recall of tuner presets.
FREQUENCY + (UP):
Shifts the frequency up.
FREQUENCY – (DOWN):
Shifts the frequency down.
BAND key:
Switches the FM and AM bands by turns.

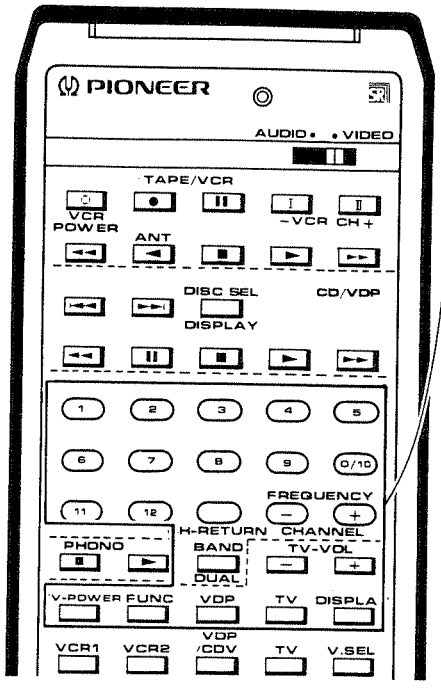
PHONO function keys (operation of turntable)

► **(PLAY) key:**
Selects play.
■ **(STOP) key:**
Stops play.



■ TV OPERATION

Set the TRANSMIT mode selector switch to VIDEO.



[Reference]
The keys marked with * have the same function in both the AUDIO and VIDEO positions.

TV function keys (operation of component display or projection monitor receiver)

1 to 12 (CHANNEL CALL DIGIT) keys:
Used to call up channels.
CH-RETURN key:
Returns to the previously received channel.
CHANNEL + (UP) key:
Changes the channel in the direction of larger CHANNEL CALL DIGIT numbers.
CHANNEL – (DOWN) key:
Changes the channel in the direction of smaller CHANNEL CALL DIGIT numbers.
DUAL (MTS) key:
Switches between MAIN, SAP, MAIN/SAP and (MONO). See the TV operating instructions for details.
* **TV-VOL +, – keys:**
Raises and lowers the volume.
* **TV-POWER key:**
Switches the power of the TV ON/OFF.
* **VDP, TV keys:**
Switches to the corresponding input.

FUNC key:
Selects each function in a cyclic.
DISPLAY key:
Puts display on TV screen. Clears display from screen.

TROUBLESHOOTING

Incorrect operation is often mistaken for equipment malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	• Power cord is disconnected. • Instances are rare, but the problem may be due to the operation of the protector circuit.	• Connect cord securely. • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control was not possible regardless of what operation switch was pressed.	• Static electricity affected the unit when the air was dry, such as in winter.	• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. • If static electricity is pronounced, it is recommended that you operate the unit using the remote controller.
No sound is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect.	• Consult page 6 — 11 and perform connections correctly.
	• The MUTE switch is pressed.	• Press the MUTING switch to cancel the MUTING effect.
	• VOLUME switch is turned down.	• Raise volume.
	• Speaker connecting wires are disconnected from speaker terminals.	• Connect wires to terminals securely.
	• One or both of the input cords are disconnected.	• Connect input cords securely.
	• TAPE2/DAT2 MONITOR switch is in the ON position.	• Press the switch again to the OFF position.
	• Connector bars are disconnected.	• Connect bars securely.
	• Stations memorized in the STATION CALL switches are erased.	• Consult your Pioneer authorized service station.
No picture is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect.	• Consult page 6 — 11 and perform connections correctly.
	• The VIDEO SIGNAL SELECTOR is not set properly.	• Set correctly.
	• The VCR and the selected INPUT SELECTOR switch are not correct.	• Press the correct switch.
High noise level	• Station has not been tuned in to correct frequency.	• Tune the station in correctly.
	• Antenna has not been connected or has become disconnected.	• Connect the antenna securely.
	FM reception • Accessory T-type antenna remains bundled up or it is not pointing in right direction.	• Stretch both ends of antenna taut and locate direction yielding optimum reception.
	• Weak broadcasting station signals.	• Replace accessory T-type antenna with outdoor FM antenna.
	AM reception • AM loop antenna is not pointing in right direction.	• Change the direction of AM loop antenna and find a position where reception is improved.
	• Weak broadcasting station signals.	• Erect outdoor AM antenna or connect ground wire.
	• Noise being picked up from this unit and other equipment (especially electrical appliances using motor or fluorescent lights).	• Stop using appliances generating noise or remove them from vicinity of stereo equipment. • Separate the loop antenna from the unit by some distance.
No auto stop	• Input signals are not strong enough.	• (FM) If the T-type antenna is being used, change to an outdoor antenna.
TV source can't be seen when the VCR's TV tuner is used.	• TV antenna is not connected to VCR, or connections are faulty.	• Consult the VCR's operating instructions, and connect antenna correctly.
	• You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions for your VCR.	• Disconnect the copy system connection (TV tuner function will operate).
Video tape copies can't be made with the VCR.	• Video tape copy connections haven't been made.	• Look again closely at the section VIDEO SYSTEM CONNECTIONS on page 7,11, and connect correctly.

SPECIFICATIONS

Amplifier section
[POWER IN] FRONT

Continuous average power output of 100 watts* per channel , min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion.**

Continuous output power
- 1 kHz, 0.005%, 8 Ω (Front) ..... 110 W + 110 W**
- 1 kHz, 0.001%, 8 Ω (Front) ..... 100 W + 100 W**
- 1 kHz, 0.7%, 8 Ω (Rear) ..... 15 W + 15 W**

Dynamic power (2 Ω/4 Ω/8 Ω) ..... 230 W/200 W/150 W
Input (Sensitivity/Impedance)
- PHONO MM ..... 2.5 mV/50 kΩ
- CD, TAPE 1/DAT 1, TAPE 2/DAT 2, VDP/CDV, VCR 1, VCR 2 ..... 150 mV/50 kΩ
- FRONT POWER AMP IN ..... 1 V/50 kΩ

Phono Overload Level (T.H.D. 0.08%, 1000 Hz)
- PHONO MM ..... 130 mV

Frequency Response
- PHONO MM ..... 20 Hz to 20,000 Hz ±0.3 dB
- CD, TAPE 1/DAT 1, TAPE 2/DAT 2, VDP/CDV, VCR 1, VCR 2 ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$dB

Output (Level/Impedance)
- TAPE 1/DAT 1 REC, TAPE 2/DAT 2 REC ..... 150 mV/2.2 kΩ
- VCR 1 OUT, VCR 2 OUT ..... 150 mV/2.2 kΩ

Tone control
- BASS 100 Hz ..... ±8 dB
- TREBLE 10 kHz ..... ±8 dB
- VCR Noise Filter ..... 100 Hz, 5 kHz: −3 dB

Loudness contour ..... 6 dB (100 Hz)
3 dB (10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM ..... 82 dB
- CD, TAPE 1/DAT 1, TAPE 2/DAT 2, VDP/CDV, VCR 1, VCR 2 ..... 98 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
- PHONO MM ..... 77 dB
- CD, TAPE 1/DAT 1, TAPE 2/DAT 2, VDP/CDV VCR 1, VCR 2 ..... 80 dB

Surround Section
- CENTER OUT (L = R = 75 mV input) ..... 2 V/1 kΩ

**Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*
***Measured by Audio Spectrum Analyzer.*

VIDEO Section
Input (Level/Impedance)
VCR 1, VCR 2, VDP/CDV ..... 1Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, MONITOR ..... 1Vp-p/75 Ω
Frequency Response
VCR 1, VCR 2, VDP/CDV, MONITOR ..... 5 Hz−10 M Hz ($^{+0}_{-3}$dB)
Signal to noise ratio ..... 55 dB
Cross talk ..... 55 dB
Enhancer (DETAIL) ..... 2 M Hz ±3 dB

FM Tuner Section
Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity ..... Mono; 15.3 dBf, (1.6 μV/75 Ω)
Stereo; 37.0 dBf, (19.5 μV/75 Ω)
Signal-to-Noise Ratio ..... Mono; 80 dB (at 65 dBf)
Stereo; 75 dB (at 85 dBf)
Distortion ..... Mono; 0.08% (100 Hz)
0.08% (1 kHz)
0.2% (6 kHz)
Stereo; 0.2% (100 Hz)
0.15% (1 kHz)
0.3% (6 kHz)
Capture Ratio ..... 1 dB
Alternate Channel Selectivity ..... 65 dB (400 kHz)
Stereo Separation ..... 48 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz ($^{+0.5}_{-2.0}$dB)
Image Interference Ratio ..... 50 dB
IF Interference Ratio ..... 80 dB
AM Suppression Ratio ..... 55 dB
Spurious Interference Ratio ..... 70 dB
Antenna Input ..... 300 Ω balanced
75 Ω unbalanced

AM Tuner Section
Frequency rage ..... When 10 kHz step 530 kHz−1,700 kHz
When 9 kHz step: 531 kHz−1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 300 μV/m
Selectivity ..... 30 dB
Signal to noise ratio ..... 50 dB
Image interference ratio ..... 35 dB
IF interference ratio ..... 65 dB
Antenna ..... Loop antenna

Miscellaneous
Power requirements
- U.S., Canadian models ..... AC 120V, 60 Hz
- Other destination models ..... AC 110/120-127/220/240V (switchable), 50/60 Hz

Power consumption
- U.S., Canadian models ..... 415 W, 540 VA
- Other destination models ..... 630 W
- In stand by condition ..... 3 W

AC Outlets
- SWITCHED x 2 ..... TOTAL 100 W MAX
- UNSWITCHED x 1
- U.S., Canadian models ..... 200 W MAX
- Other destination model ..... 100 W MAX

Dimensions ..... 420 (W) x 124 (H) x 401 (D) mm
16-7/16 (HW) x 4-7/8 (H) x 15-13/16 (D) in
Weight (without package) ..... 10 kg (22 lb 1 oz)

Furnished Parts
- FM T-type antenna 1
- AM Loop antenna 1
- Dry cell battery 2
- Remote control unit 1
- Operating instructions 1

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.

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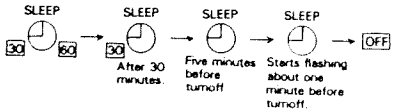
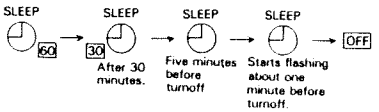
Printed in Japan <ARB1113-A>

CORRECTION

VSX-5300

(INCORRECT)	(CORRECT)
• Page 14: Section "⑪ IMPEDANCE SELECTOR switch"	
• When using two pairs of speakers: Select ② as the selector switch position and use speakers having impedance of 8 ohms or more.	• When using two pairs of speakers: Select ① as the selector switch position and use speakers having impedance of 8 ohms or more.
• Page 16: Section "⑥ ACOUSTIC switches"	
FLAT→LOUDNESS→A→B→C→D→E→F	FLAT→LOUDNESS→A→B→C→D→E
• Page 19: Section "DIRECT ACCESS TUNING"	
Notes regarding FM or AM direct access tuning • When the CHANNEL STEP switch is set to the AM 10kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.	**Notes regarding FM direct access tuning** • When the CHANNEL STEP switch is set to the FM 100 kHz position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.
• Page 30: Section "TAPE DECK OPERATION"	
(PAUSE) key:	❚❚ (PAUSE) key:
• Page 32: Section "RECEIVER SECTION OPERATION"	
	

• Page 31: Section "VDP OPERATION"

Please delete the next explanation from the operating instructions.

PGM (PROGRAM) key:
Allows use of chapter program play,
frame search and time search.